

HOME VEGETABLE
GARDENING FROM
A-Z

ADOLPH KRUHM



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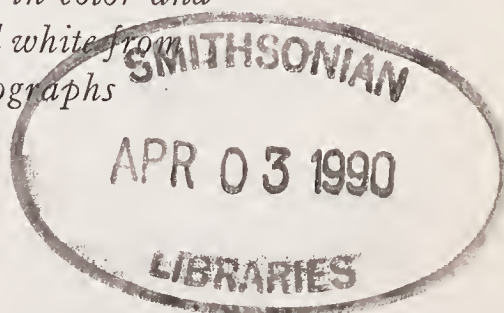
HOME VEGETABLE GARDENING FROM A TO Z

*With Special Reference to
Pacific Coast Conditions*

BY
ADOLPH KRUHM



*Illustrated in color and
black and white from
photographs*



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INTRODUCTION

APRIL 15, 1917, will go down as one of the most momentous days in American history, quite apart from the fact that it marked our entrance into the World War. It will be remembered by gardeners throughout the land as the day when the President asked every other citizen to recognize the importance of home gardening as a means to help feed the world. Several weeks before then had marked the spiritual birth of this book.

The following pages are intended primarily to give reliable guidance to the millions of new-born gardeners who have never used a spade, a rake, or a hoe. How to perform the many simple little acts, the sum total of which constitutes the fine art of gardening, is plainly told through words and pictures.

Rather unusual efforts have been made to have the pictures tell the story wherever possible. Often they illustrate how the work should be done, how the plants develop, and what the fully-grown vegetables look like. It has taken the best part of ten years' work in the author's own home gardens to secure the majority of the pictures used in illustrating this book, which is the most comprehensive pictorial presentation of vegetable growing attempted to date.

Wherever practicable and possible, definite information is given as to time of maturity of different sorts, their adaptability to different soils and sections, and their general behavior under normal conditions. This will cause the book to be equally welcomed by the experienced gardener in search of dependable information on the much neglected question of varieties. "Which kinds and why"

INTRODUCTION

is a topic rarely dealt with satisfactorily by writers on vegetable gardening. This book attempts to remedy that deficiency.

In connection with this particular phase of the subject, it should be borne in mind that horticulture is not an exact science and that opinions are judgments rather than facts. The best posted experts differ on the subject of relative merits of the different varieties. However, the observations recorded in the following pages are based on intimate studies extending over many years, in many sections of the country. In the absence of other records they will serve as the starting point for those who are anxious and willing to help put vegetable gardening on a more nearly scientific basis.

In an endeavor to make this book serve millions and to make it truly useful to gardeners in *all* sections, a great deal of expert advice was sought. In incorporating it in the book grateful acknowledgment is due Mr. Howard M. Earl for helpful hints on all topics. In making special reference to Pacific Coast conditions, the excellent work of Professor Wickson on California vegetables has been freely consulted. A quarter century after its first edition, it must still be considered the leading treatise on the subject. Particular thanks is due Mr. Leonard Barron, Editor of *The Garden Magazine*, whose generosity in putting at my disposal thought, time, and everyready craftsman's advice has helped a great deal in making this work complete and authoritative.

With this goes the hope that this book may help to really make America a land of gardens; to sufficiently interest those who have never before made a garden, to dig, rake, sow seeds, and put plants into the ground; to encourage those with experience to do more gardening and to help the expert to still better results.

ADOLPH KRUHM.

Garden City, N. Y.
March 1, 1918

HOME VEGETABLE GARDENING
FROM A TO Z





LOCATION OF GARDEN

SEEMINGLY “impossible” places often make good gardens. In Switzerland, where tillable soil is very valuable, one may observe gardens nestling on mountain sides, made by carrying fertile soil from the valley and depositing it in rock depressions within easy distance of the alpine huts.

The vegetable garden should be in close proximity to the home. It may be one's backyard or the lot adjoining, but it should be handy so spare time can be devoted to its cultivation. Any garden is better than no garden and any piece of ground will make a garden of some kind.

Where a choice may be had, select a level piece of ground, free from stones, and one that has been cultivated before. Newly broken sod makes good gardens if properly fertilized. Most any soil grows some crops, and the following pages tell what will grow best on soils of different character.



DRAINAGE

THIS most important phase of garden preparation is all too often disregarded to the detriment of satisfactory results. In order to thrive, a garden must have proper drainage. Proper drainage keeps the soil in "fit" condition to bear the biggest crops which its fertility enables it to yield.

Drainage means proper carrying off of surplus moisture. In loose, sandy soils, too much drainage must often be stopped, as far as possible, by the liberal use of coarse manure. Stiff, heavy clay soils should be mixed with cinders or underlaid with drain tile to allow surplus moisture quickly to seep through.

Correct drainage makes cold, heavy clay soil warmer and puts all soils in better physical condition to bear the desired crops. Where poor drainage and a lack of facilities to create it threaten to handicap the gardener, a liberal use of lime will frequently correct evils due to lack of drainage.



SOIL AND PREPARATION

SINCE results from every garden depend largely on the soil, a few minutes of thought on the subject will well repay the home gardener in the end. In the first place, remember that nearly every soil supports plants of some kind. Where the soil is in the rough stage, these plants are mostly weeds. But any soil that supports a crop of weeds will also nourish cultivated crops.

Start with what soil you have. If it is a heavy clay, add plenty of ashes, cinders, and coarse manure, working all well into the soil with spade and rake. (See details on page 4.) If, on the other hand, the soil is of a light, sandy nature, use plenty of lime and coarse manure.

To prepare the home garden to yield big crops of vegetables, a wheelbarrow load of manure to every two square yards of ground is not too much. The use of artificial (chemical) fertilizers requires special study of the effects of chemicals on plant life.



DIGGING AND PLOWING

WHERE the garden is larger than 30 x 50 ft. it saves time to have it plowed. But plowing never does the work as thoroughly and as well as digging, since few plows go deeper than six inches, whereas spading generally turns over ten or twelve inches. Since the top-layer fertility of any soil is apt to be impaired by crops it may have supported previously, deep spading or plowing generally brings to the surface virgin soil of greater fertility.

Deeply dug or plowed soil retains the moisture longest. In western states, where dry weather rules during the greater part of the summer, they use sub-soil plows that go beyond the six-inch limit, stir up the soil to its full depth, and serve as a crop insurance against dry spells. Dig deeply! It will bring to the surface hitherto untouched plant food. It will break up tenacious clay soils and improve sandy loams by giving the air free access. It will guarantee bigger crops of better vegetables, no matter where you live or what your soil.

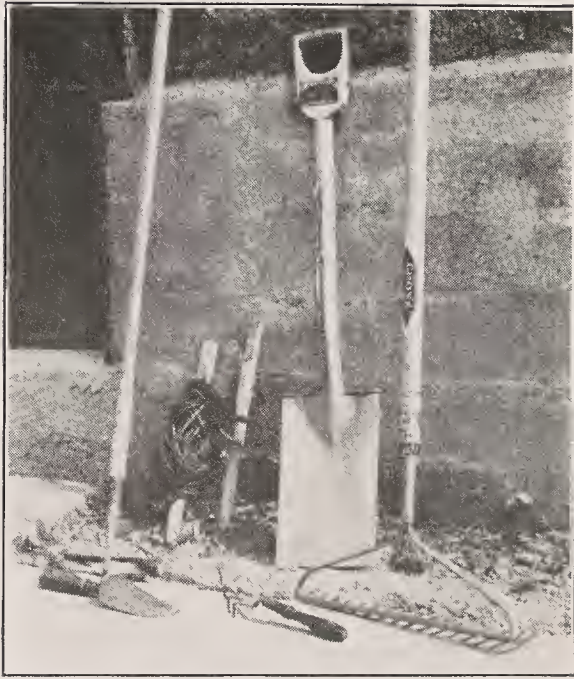


MAKING A PLAN

THE best gardens generally are those started on paper, with a pencil. Just like the builder of a house goes by a blue print, so should the maker of a garden follow a carefully thought-out plan.

Draw your garden plan to a scale, say one-eighth of an inch for every foot of ground. Lay out the garden in fifteen-foot beds, running the rows across the bed. Put a two-foot path in both front and back, where you can turn with the wheelhoe or deposit weeds, stones, etc., prior to their removal.

Run the rows any way you like—east and west *or* north and south—it makes no difference. Place them as far apart as is suggested under the various chapters. A good general rule to follow is to allow as much space between the rows as equals the height of the plants when fully grown. For instance, bush beans grow about eighteen inches tall. Then allow from eighteen inches to two feet between the rows of bush beans.



TOOLS OR IMPLEMENTS

TO EXECUTE the planned garden, you should have certain tools. The number and variety of tools needed depends entirely on the size of the garden and the variety of crops grown. But a number of simple tools are required to make even the smallest garden, and these are shown above.

A spade to dig the soil; a rake to level it and get out stones; a line to get the furrows and paths straight; a hoe with which to make the furrows and cultivate the plants; a trowel for transplanting purposes, and an Excelsior hand weeder for stirring the soil between the plants in the row—these are the principal tools needed to make a garden of modest dimensions.

With a garden, size 20 x 50 or larger, it pays to have that greatest of all garden labor savers, the wheelhoe. There are several types of them, all equally practical and inexpensive.



RAKING AND MAKING FURROWS

IT IS the mission of raking to finely pulverize the surface of the soil and to remove stones and trash that may prove an obstacle to the welfare of the little seedling plants. Thoroughly raked and properly leveled soil greatly facilitates cultivation later on.

Push and pull the rake through the soil, lightly at first, to get the surface level, then to the full depth of the teeth, to get out coarse lumps and stones. When you can pull the rake through the soil without particular effort and it strikes no hidden objects, raking may be considered well done.

Furrows are opened with either hoe, hoe handle, or wheelhoe plow. For fine seeds, such as lettuce, onions, a shallow furrow is easily made with the hoe handle. For seeds of coarser nature, the corner of the hoe will make rows of any depth. Directions how deep rows should be made for different seeds are given under respective chapters.



TIME OF SOWING SEEDS

THE time for sowing seeds depends entirely on what kinds of vegetables you want to grow. There are hardy, half-hardy, and tender vegetables, their nature being judged by how they stand cold or warm weather. Under the various chapters will be found definite suggestions for each class.

Seeds of hardy vegetables, like peas, radishes, lettuce, etc., may be sown as soon as the soil can be dug and raked in the spring. Others, like beans and corn, should not be sown until danger of frost is passed. Still others, like cucumbers, melons, squashes, etc., known as tender vegetables, should not be sown until the ground is thoroughly warm and even cool nights are but a memory.

Do not sow fine or light seeds when high wind prevails. It scatters the seeds broadly in the row and cultivation later on will prove difficult.



COVERING SEEDS

MANY gardening failures are traceable directly to faulty covering of the seeds. They may be covered too shallow, when the birds will get some or the sun will dry off the shallow-rooting, delicate seedlings; or they may be covered too deeply, when the sprouts will be smothered or so weakened through the labor of pushing through the soil that they die after reaching daylight.

A good general rule to keep in mind is to cover seeds to the extent of twice their thickness. For illustration, radish seeds are about one-sixteenth of an inch in diameter—cover them from one-eighth to one-quarter inch deep. On light sandy soils, deeper covering may be practised than on heavy clay soils.

The exception to this rule are beans, corn, and peas which may be covered two to four inches deep, depending on character of soil. Specific suggestions how to cover the different seeds are made in the different chapters.



CULTIVATION

WITHOUT timely and diligent cultivation a garden will either be a partial or total failure. To yield good crops, the plants must be given every possible chance to develop quickly and make as strong and healthy a growth as season and soil fertility permit.

To attain this end cultivation is necessary not only between and alongside of the rows, but also between the plants in the row. Cultivation keeps down the weeds, gives the air access into the soil, and conserves the moisture, by formation of a dust mulch.

Eliminating weeds puts every bit of fertility at the disposal of the cultivated crop. By giving the air a chance to circulate through the soil, the soil is kept alive and sweet. The closing of cracks in drying soil preserves the moisture underneath. Heavy clay soils need more cultivation than soils of sandy nature. Any act that accomplishes any or all of above three important garden needs is classed as cultivation, regardless of tools used.



HOEING

THE most important factor in cultivation is hoeing. It may be done with a wheelhoe, a handhoe, or a stout, narrow rake. The last named is hardly ever considered as a hoeing implement, yet it pulverizes the soil better than any other tool.

The handhoe is the most useful tool in the garden. Early in the season one may hoe quite close to the plants with it and may sink it quite deeply into the soil and benefit the crop. Later on, keep farther away from base of plants and hoe more shallow, so as not to disturb the many fine feeding roots which spread just beneath the surface in exact proportion as the tops spread above. There are many styles of handhoes the usefulness of which each gardener must determine for himself.

The wheelhoe is an ideal tool to be used in conjunction with the handhoe. It is particularly useful in keeping the paths between the rows free of weeds and thoroughly stirred.



HAND WEEDING

NO MATTER how well you are equipped with tools, a certain amount of hand weeding must be done in every garden. Vegetables that require hand weeding in particular are carrots, onions, parsnips, parsley, and all others that are especially delicate as seedlings. What helps matters greatly is the fact that small girls and boys who love to come in the garden to help can weed as quickly and as good as "daddy" himself, thus saving the man's time for the heavier work.

It pays to go over the rows at least once a week and carefully remove every weed, however small, from among the plants in the row. A particularly helpful tool in hand weeding is Cleves Angle Trowel. Even the children soon learn how to work with it, though, as a rule, a short, pointed stick is easier for them to handle.



THINNING OUT THE SEEDLINGS

PARTLY because most seeds may be bought cheaply, partly because the gardener wants to make sure of a good, full row of seedling plants, most people sow seeds much more thickly than they should. This makes it necessary to pull up a good many of the superfluous seedlings and this is called "thinning out."

The main purpose of thinning out is to give each plant a fair chance for normal development. Plants growing in "crowded" rows will become spindly and either not form a properly developed product at all (as, for instance, lettuce) or the crop will be seriously cut short, as with beans and other plants of which we eat the product rather than the plant itself.

Thinning out is most important work and should be done promptly. How to do it and when or how to plant so that thinning, in connection with some classes of plants, does *not* have to be done is told under the respective chapters.



TRANSPLANTING

ONE phase of transplanting goes hand in hand with thinning out as described on preceding page. Do not waste the vegetable plants pulled up while thinning. Simply prepare ground as for sowing seeds and set out the surplus of seedling plants.

Some vegetables cannot be transplanted successfully after being pulled up in the garden. Notable instances of these are all those of a "vining" character, like cucumbers, melons, etc. Others, like carrots, salsify, etc., can be transplanted only under uncommonly favorable conditions. Whenever and whatever transplanting is done, be sure to press the soil firmly to the roots and shade the plants for a few days after it is done. Some vegetables, like cabbages for instance, are positively benefited by repeated transplanting. Transplanting is best done after a good, soaking rain. Lacking that, the soil should be watered well before plants are set out.



INTENSIVE CULTIVATION

ANY garden in which every square foot of ground is utilized to best advantage is really a good example of intensive cultivation. The several phases of gardening that stand for intensive cultivation are 1, a careful planning ahead of time which crops should follow each other in one and the same row; 2, the proper use of space between rows of late vegetables for quickly maturing crops early in the season and 3, the sowing, at one and the same time, of several kinds of vegetable seeds in one and the same row.

The last named is difficult to practice and requires the knowledge and experience of a trained gardener. The other two are largely a matter of applying common sense and of putting to a test such theories as every home gardener forms from season to season. References will be found throughout this book as to the vegetables that lend themselves readily to the different kinds of intensive cultivation.



FIGHTING INSECTS

SOME morning you will go out into your garden to find six or eight of every dozen cabbage, tomato, lettuce, or any other plants neatly chewed off just beneath the surface. Chances are that, if you will but dig around the roots and look, you will find, within an inch of the surface, a brownish-gray grub, about one inch long. That is the mischief maker, the cutworm, easily the most destructive insect in the home garden. It is met with largely in soil that has been in grass or sod for some years. All newly broken land is full of cutworms.

There are several remedies for this pest, such as trapping under boards and preparing poison baits. But the best is the protective measure of placing stiff paper or cardboard collars all around each plant. Place them to within two inches of base of plant, encircling it completely, and push about one inch into the soil. It may be a good deal of trouble to do this where a large number of plants are set out, but it stands for complete insurance.



OTHER INSECT PESTS

THE garden's enemies may be divided into those insects that eat either plant or foliage or chew holes in it and those that suck the plant's juice or life blood. Of the two, the "sucking" pests are by far more insidious, because their work is not visible at first. Generally it does not begin to show until a good deal of damage has been done. The very large class of Aphis or plant lice is the most widely met with among these enemies. A nicotine solution, sprayed as per directions given on container, is the most effective remedy.

Leaf-chewing insects are more easily combated because they will eat the poisoned foliage and die of stomach poisoning. The common potato bug is, perhaps, the best known insect of this type. Spraying the foliage with Arsenate of Lead or sprinkling powdered insecticides over the plants will generally dispose of the bugs. Under the different chapters throughout the book will be found suggestions how to fight insects.



SPRAYING

ONE of the reasons why the scores of different insects that threaten the welfare of the home garden generally lead a thriving existence year after year is because of the gardener's indifference. Systematic spraying will not only reduce invading bug armies but will also combat the many fungous diseases to which plant life is heir. Fungous diseases most commonly met with in vegetable gardens are mildew, blight, and rust.

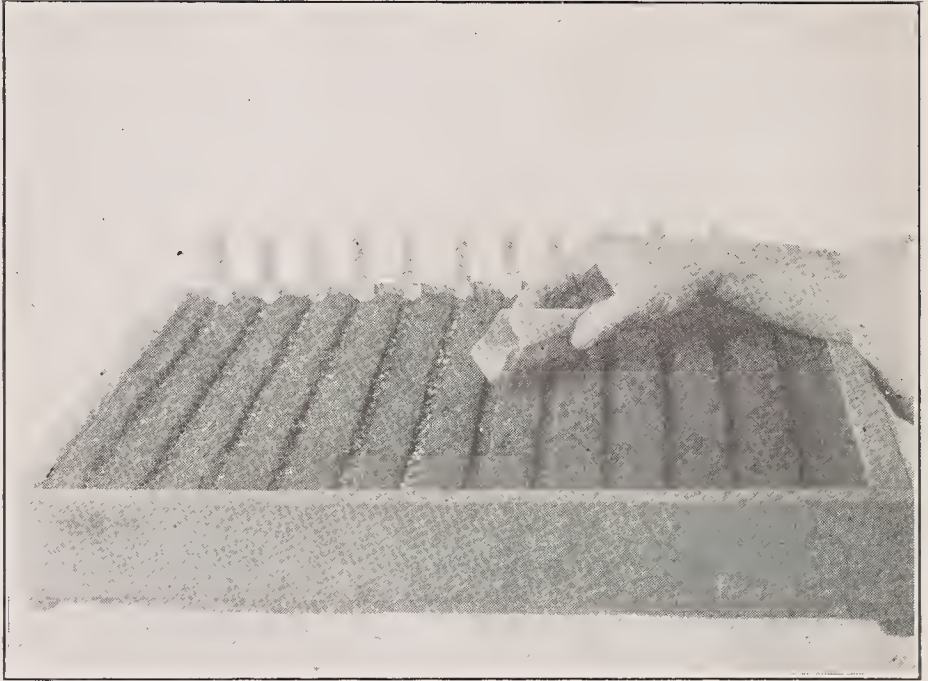
Fortunately, one infallible remedy takes care of *all* the fungous diseases and that is Bordeaux Mixture. If, besides being troubled by fungus, the plants are attacked by chewing insects, add Arsenate of Lead to the Bordeaux Mixture and you'll fight both unwelcome intruders with one spray.

As already mentioned under insect pests, the kind of spraying solution to be used depends entirely on the kind of pests which the spraying is supposed to combat. Speaking broadly, we recognize cutting insects (cutworm and



borer) chewing insects, and sucking insects. No amount of spraying will “get” cutworms and borers—they must be gotten bodily and destroyed. All leaf-chewing insects may be poisoned by arsenic sprays. All sucking insects may be destroyed by either nicotine sprays or by oily sprays which either choke them or smother their bodies. It is thoroughly practical to spray for both eating and sucking insects at the same time by combining the arsenic with the nicotine remedies. But it is rather wasteful, because the nicotine spray must come in direct contact with the bodies of the bugs, whereas the stomach poison need only hit the foliage in a broad way.

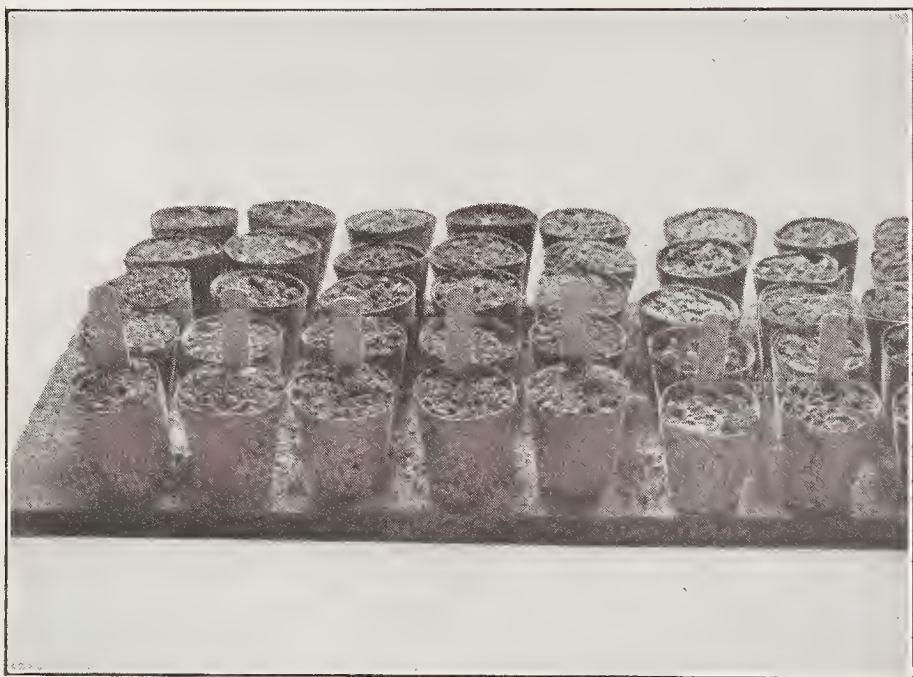
Sound rules for the application of all sprays come with all the standard preparations, while stringent laws see to it that the gardener gets just what he buys for the purpose of fighting the battles in the garden.



WHAT IS A SEED FLAT?

ANY shallow box that will hold at least four inches of finely sifted soil and is of convenient size to be easily lifted around will answer the purpose of a seed flat. It is really a miniature seed bed designed to enable the gardener who has no hotbed or cold frame to start plants indoors before seeds can be sown into the open ground.

The size of the average seed flat is about 12 x 20 inches, by five inches deep. Fill it with four inches of as good garden soil as can be got, make the furrow with the blunt edge of a ruler by pushing the ruler back and forth between the sides of flat. Place furrows about four inches apart. Mark each with a little label giving name of vegetable and date of planting and thinly sow your seeds, then close furrows. Cover with newspaper and water thoroughly and keep on watering in this fashion until the seedlings appear. If they grow spindly, move box to a cooler position.



STARTING PLANTS INDOORS

AS ALREADY mentioned under “transplanting,” certain kinds of vegetable plants cannot be successfully transplanted if the root system is disturbed in the least. While cucumbers and melons are very exacting on that point, beans and corn are almost as particular. Yet, a few *extra early* hills of all of these are very acceptable and here is the way to make sure of them:

From your seed store or florist secure a supply of handy little paper pots. These come in at least three sizes. The smallest are suitable for transplanting seedlings started in the seed flat. The larger sizes will do for vegetables mentioned above. Fill with good soil and sow from five to six seeds to each pot, about three to four weeks before they could be sown outdoors. When seedlings are well-developed, reduce to the three sturdiest and give fresh air frequently. When all danger of frost is over, take into the garden, tear bottom off pots, and set in carefully prepared hills, leaving pot intact around root ball.



USE OF ARTIFICIAL FERTILIZER

WELL-ROTTED stable manure is unquestionably the best fertilizer for the garden because it not only contains all the elements necessary to sustain plant life but also supplies humus—that most essential factor which retains moisture. The principal fertilizer elements needed to grow good crops of vegetables are Nitrogen, Phosphoric Acid, and Potash. One ton of stable manure contains ten, five, and ten pounds respectively, of these three.

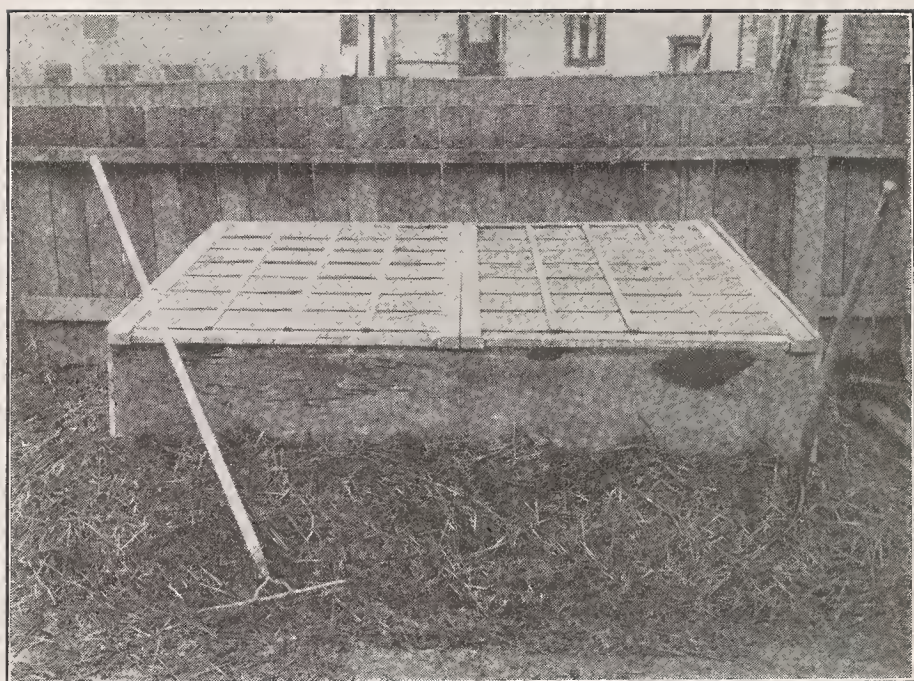
Really remarkable results are scored with the help of commercial fertilizers, however, where the fertility needs of the vegetables to be grown are correctly analyzed. A “complete,” high-grade fertilizer should contain 2, 4, and 5 per cent. respectively of Nitrogen, Phosphoric Acid, and Potash. As a general guide, remember that Nitrogen favors development of green crops, like lettuce, cabbage, etc. Phosphoric Acid stimulates plants that ripen fruits, like beans, peas, etc. Potash aids woody plants, fleshy fruits, and gives flavor.



IRRIGATION

MORE than 90 per cent. of every green vegetable is water. How to supply the plants with all the moisture they need to mature the crop deserves some thought. The amount of moisture required by different vegetables varies greatly. As a general rule, plants of which we eat the juicy foliage, like spinach, cabbage, etc., require more moisture than plants of which we eat the fruit. Yet elegant lettuce may be grown through comparatively dry seasons where thorough cultivation is practised.

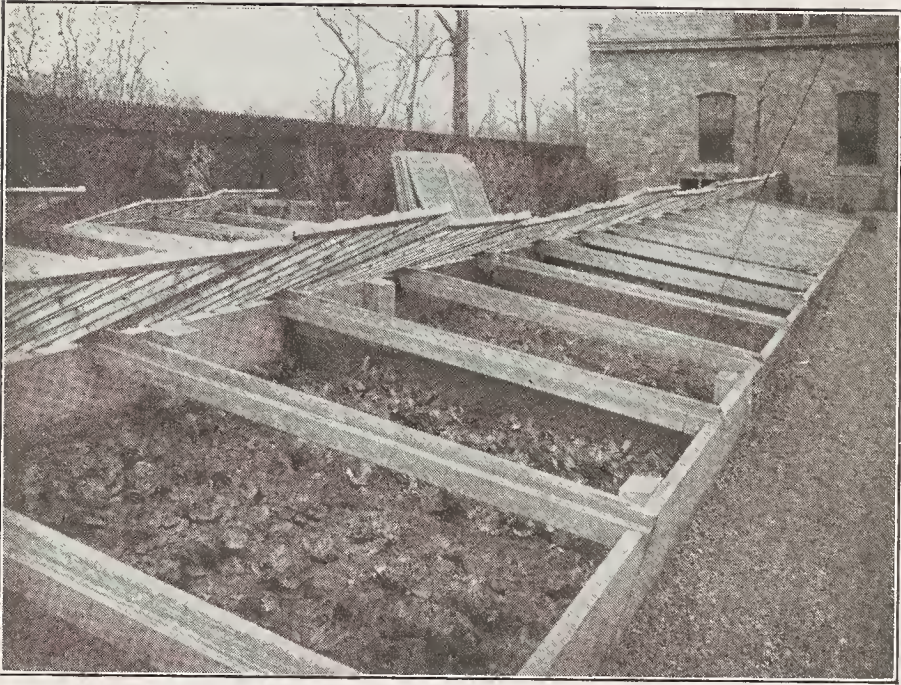
It may thus be seen that no hard-and-fast rules can be laid down. Plants which are children of tropical climates (egg plants, peppers, tomatoes, etc.) can get along without moisture (other than that gathered from the air) for surprisingly long periods. Whenever watering is resorted to, however, regardless of what kind of plants you irrigate, put the water where it belongs—to the roots. One thorough *soaking* of the soil is more beneficial than a dozen “sprinklings.”



HOTBEDS

A HOTBED is simply a boarded-up garden covered with glass. In it one may grow certain crops to maturity out of season and hasten the maturity of other crops requiring a long season, by affording them an early start. A hotbed consists of a subframe which extends from fifteen to eighteen inches beneath the soil, depending on the climate. On top of this rests the frame proper, generally about eighteen inches high in back, twelve inches in front, sloping toward south. This is covered with a glass sash which keeps in the heat. A single-sash hotbed of standard size measures three feet wide by six feet long; larger ones should be constructed in multiples of three feet wide.

There are several methods by which the soil may be heated in a hotbed. The most general custom is to use fermenting manure. This is piled up outdoors, in heaps four to five feet square, and high. It soon begins to steam, when it should be turned over. This is repeated until the pile is thoroughly and uniformly heated. This



work requires some experience and special study and is the most important factor in hotbed management.

After the manure reaches a *uniform* heat, it should be packed tightly into the subframe, paying particular attention to it that it is tramped well around sides and into corners. On top of the manure are placed from four to six inches of rich, finely sifted soil. It is then left to stand for several days, or until the soil temperature goes down to ninety degrees or less, depending on what you intend to raise. Seeds may then be sown.

The two most important factors in managing a hotbed are regular watering and timely ventilation. Without ample water the heat in the hotbed, retained by the glass sash, will burn up the plants. Without ventilation, the plants will grow spindly, weak, and be ill-fitted to undergo subsequent transplanting.

Hotbeds are generally dug and prepared in the fall, filled with manure in mid-winter, and pressed into actual service some time in February. However, all depends on where you live and what you want to grow.

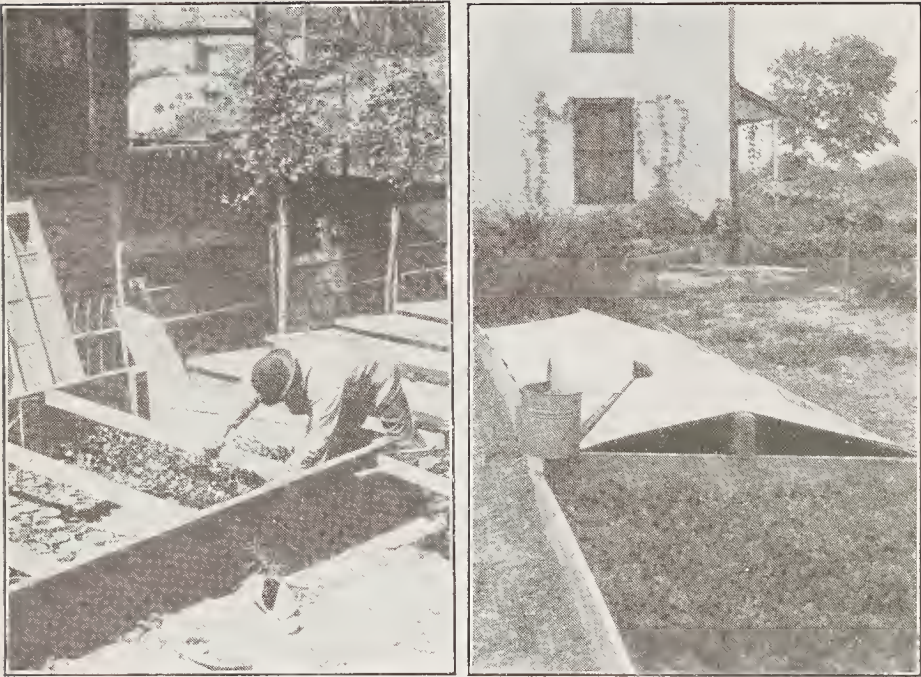
HOME VEGETABLE GARDENING



VEGETABLES FOR HOTBED CULTURE

| KIND AND VARIETY | DISTANCE APART TO PLANT | DAYS RE- QUIRED TO YIELD CROP | COMPANION CROPS |
|--------------------------------|-------------------------------|-------------------------------------|------------------------------------|
| Bean, Triumph of Frame . . . | } 4 x 8" | 45-50 | } Radishes Cress Parsley |
| Bean, Early Wonder . . . | | 42-45 | |
| Bean, Dwarf French Forcing . . | | 45-50 | |
| Beet, Electric . . . | } 2 x 6" | 40-45 | } Carrots Onions from set |
| Beet, Crosby's Egyptian . . . | | 45-50 | |
| Beet, Eclipse . . . | | 50-52 | |
| Carrot, French Forcing . . . | } 1 x 6" | 45-50 | } Kohlrabi to follow Lettuce |
| Carrot, Gold Ball . . . | | 50-55 | |
| Kohlrabi, White Vienna . . . | 2 x 6" | 55-60 | Radish Spinach |
| Lettuce, Grand Rapids . . . | } 6 x 6" | 35-45 | } Beets, Car- rots Radishes |
| Lettuce, Big Boston . . . | | 40-50 | |
| Lettuce, Mignonette . . . | | 45-55 | |
| Radish, Rapid Red . . . | } 1 x 4" | } 18-25 | } Lettuce |
| Radish, French Forcing . . . | | | |
| Radish, Early Frame . . . | } 2 x 4" | } 25-35 | } Carrots Beets |
| Radish, Icicle . . . | | | |
| Spinach, Thick-Leaved . . . | 2 x 4" | 30 | Radishes, Onions |

Note. All vegetables grown under glass will thrive better after February 1st than earlier during the winter.



COLD FRAMES

THESE are simple hotbeds without the heat. No manure being used in them eliminates the need of digging a pit or using a subframe. With the help of a cold frame, the home gardener may extend the season of fresh vegetables four weeks in the fall and enjoy such hardy vegetables as radishes, lettuce, onions, etc., two to four weeks before they can be gathered from the open ground in the spring.

Cold frames are most useful companions to the hotbed. After plants have reached the size that makes transplanting from the hotbed necessary, they may be shifted into the cold frame to be properly hardened off before being set into the open ground. Beans, beets, carrots, etc., sown in the cold frame the latter part of August will bear the crop when frosts outdoors have put an end to vegetation. By keeping out the cold, cold frames form the connecting link between the hotbed and open ground.



VEGETABLES FOR GREENHOUSE CULTURE

IN ADDITION to the kinds described on preceding pages, the very much larger space available in greenhouses makes possible the cultivation of larger growing plants such as cucumbers, melons, and tomatoes. Cauliflower is also a profitable greenhouse crop, grown on side benches, as is parsley, a few roots of which will furnish garnishing all winter.

In the greenhouse the heat is under absolute control and by partitioning the house, cool season crops as well as those requiring a higher temperature may be enjoyed at one and the same time. But do not attempt to grow radish, lettuce, spinach, and beets side by side with beans and tomatoes. The average night temperature required by the latter is sixty-five degrees, whereas the former "cool season" crops thrive best under sixty degrees.

While experience is the most dependable guide in growing vegetables in the greenhouse, the following table will help the beginner to start right:

VEGETABLES FOR GREENHOUSE CULTURE

(In addition to the classes and varieties suggested on page 28 for use in hotbeds.)

| KIND AND VARIETY | DISTANCE APART TO PLANT | DAYS RE- QUIRED TO YIELD CROP | SOIL RE- QUIREMENTS |
|--|-------------------------------|-------------------------------------|---|
| Cauliflower, Dwarf Eufurt . | 12 x 12" | 100-125 | Good drain- age, ample water |
| Cucumber, Improved Telegraph | } 2 x 2 ft. | 115-120 | } Rich sandy loam and leaf mold |
| Cucumber, Davis Perfect . | | 75-90 | |
| Muskmelons, Blenheim Orange | } 2 x 2 ft. | 100-115 | } Rich, loose loam |
| Musk Sutton's Emerald Gem | | | |
| Tomatoes, Bony Best | } 18 x 24" | 95 | } Porous loam of moder- ately rich nature. |
| Tomatoes, Livingston's Globe | | 100 | |
| Tomatoes, Sterling Castle . | | 95 | |
| Tomatoes, Comet | | 95 | |
| To be grown as a by-product | } 2 x 2 ft. | 15-20 | } Too rich soil en- courages rank leaf growth |
| Asparagus; forced from four- year-old roots | | | |
| Rhubarb, from strong roots . | 2 x 2 ft. | 15-20 | Grow under benches |
| Water Cress | 1 x 1 ft. | 35-45 | } In a corner of a cool house |
| Pepper Grass | 2 x 4 ft. | 25-35 | |
| Parsley from roots | 1 x 1 ft. | 45-50 | Best from spring-sown roots cut back |

ASPARAGUS

A DELICIOUS vegetable, yielding one of the best spring delicacies year after year, providing it is properly cultivated and cared for. Equally easy to grow from either seeds or roots, but time is saved by starting the asparagus bed with two-year-old roots.

Asparagus is very hardy and thrives in all sections and soils, though it does best in the temperate zones and in soil of light, sandy nature. Seeds may be sown in the spring, roots may be set out in spring or fall. Beds from seeds will bear stalks ready for cutting in four years after sowing, while cutting may be started two years after planting two-year-old roots.

Asparagus beds bear for many years if correctly managed and fertilized. For detailed directions consult pages 255-257.



BARR'S MAMMOTH ASPARAGUS

Good for home or market

BEANS, DWARF OR BUSH

BEANS grow in any soil and everybody can grow them. They are distinctly a "warm weather" vegetable and should not be sown outdoors until the maple trees develop leaves. They have no insect enemies of any consequence and are one of the easiest vegetables to grow and harvest if the simple points mentioned on pages 49-58 are observed. Bush beans mature in from fifty to eighty-five days from date of sowing seeds.

BEANS, POLE OR CLIMBING

THESE are equally as tender as the bush beans and should not be planted until the weather is quite settled and the soil is warm. All pole beans bear later than the dwarf sorts, but are also more prolific. They require more labor because poles must be provided and vines should be tied up, but they bear longer and the pods are easier to gather. For full directions see pages 59-62.



BRITTLE WAX BUSH BEAN
An early, stringless quality sort

BEANS, LIMA

LIKE the common beans described on preceding page, Limas are divided into dwarf or bush kinds and tall or climbing varieties. Unlike other beans, they are used as "shelled" beans only, since their pods are unfit for eating.

Bush Limas are likewise divided into several distinct classes, according to the beans they yield. They greatly vary in size and quality, depending upon the sort you plant. All are of best quality if picked while quite young and while the beans are green.

Pole Limas are very rank growers and require strong supports, twelve to fifteen feet tall. They mature later than the dwarf or bush kinds, but are more prolific. As descendants of semi-tropical plants, Lima beans are very tender and should not be sown until the weather is quite warm and settled. Always plant them "eye down," for reasons given on page 63.



FORDHOOK BUSH LIMA
The highest quality product

BEETS

NEXT to turnips, beets are the principal "root" vegetable for winter use and as such they enjoy a far greater popularity in Europe than in America. They are easily grown in any soil, have no insect enemies of any consequence, are easily harvested and stored.

Since the young beet plants are very hardy, the seeds may be sown very early in the spring. Some sorts develop much quicker than others, but the late-maturing kinds are the best keepers. Extra early sorts may be sown as late as the middle of July to grow large enough for winter use.

Beet seeds are "spongy" kernels containing from two to four "germs" each. To make them sprout quickly and uniformly, walk over the rows after sowing seeds. For this and other particular points of cultivation see pages 152-157.

A type of beet called Swiss chard is grown extensively for greens. It is fully described and dealt with on pages 186-187 and 227.



CROSBY'S EGYPTIAN BEET

A popular favorite everywhere

BRUSSELS SPROUTS

ONE of the least known members of the cabbage family and one of the most delicate and delicious in flavor. Can you imagine a cabbage plant which, instead of forming a head, grows a stalk about two feet tall, with the leaves set about two to three inches apart all around and up the stem? That is the way this vegetable grows and the "sprouts" develop where the leaves join the stalks.

These "sprouts," as shown in quart basket alongside, are boiled and served with a cream sauce. They surpass cauliflower in flavor, are easier to grow, and keep better. While they are not an economical vegetable to grow, requiring about 150 days from seeds to finished sprouts, Brussels sprouts deserve a place in every garden devoted to growing quality vegetables for home use. See complete directions for cultivation on pages 258-259.



LONG ISLAND BRUSSELS SPROUTS

A good sort for home use

CABBAGE

AS CHILDREN of cold, moist climates, all cabbages thrive best in cool sections that enjoy an abundance of rainfall. The cabbage family is large, as a thorough study will reveal. The wild cabbage is the common ancestor of borecole, broccoli, Brussels sprouts, cauliflower, kale, kohlrabi, and many other popular vegetables. Cabbages proper are divided into three classes, namely: "white," or common cabbage, "savoy" or crinkly leaved cabbage, and red cabbage.

Cabbage is one of the few vegetables that may be enjoyed the year around. It is easily grown from seeds, the plants thrive in most any soil, and have but few easily combated insect enemies. A large choice of varieties acclimated to many soils, seasons, and climates, make the growing of cabbage an easy matter for the man who likes this vegetable. Full instructions for making a success of raising cabbage are given on pages 67-76.



COPENHAGEN MARKET CABBAGE
Great in quality, size, and earliness

CARROT

CENTURIES of strife and the need of storing food supplies against unfriendly winters have made carrots one of the main stand-bys among vegetables for winter use with European nations. They certainly are a most wholesome and nutritious vegetable, easily grown, easily harvested, easily stored, and easily relished.

Carrots grow in most any soil, though a sandy loam, plentifully enriched with well-rotted manure, suits them best. Early kinds will grow large enough for use in seventy-five to eighty days, but the best keeping sorts for winter storage require a hundred days or more to reach full size.

The largest and also latest maturing varieties of carrots are highly esteemed among live-stock raisers as a stock food for cattle and horses during the winter. While no medicinal qualities can be attributed to them, they certainly help to keep the animals in good condition. For all particulars concerning this much neglected vegetable see pages 158-161.



DANVERS HALF LONG CARROTS

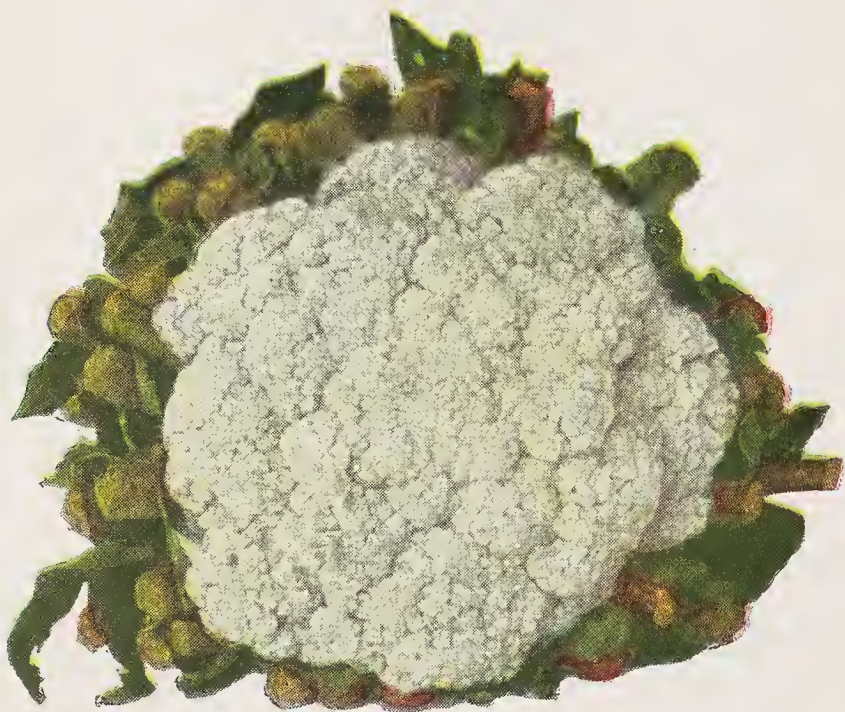
The dependable standard throughout the country

CAULIFLOWER

ITALIANS are said to have “discovered” cauliflower as a food plant. Dutch gardeners improved it, Danish gardeners perfected it, and to this day the finest cauliflower seeds come from Denmark because the climate of that country is nearly ideal for the development of this vegetable.

Cauliflower is a member of the cabbage family. Its “heads” are really a thick, fleshy mass of flower stems bleached white by overlapping outside leaves. They are of very delicate flavor and for this reason are more highly prized and priced than common cabbage.

The plants will not “head” in hot, dry climates or during the season when hot, dry weather prevails in moderate climates. They need a superabundance of plant food and water at all times. You can grow this delicious vegetable to perfection by carefully studying the directions given on pages 260-263.



DRY WEATHER CAULIFLOWER
The best all-round sort for all sections

THE STAPLES OF THE VEGETABLE GARDEN

SUCH foods as will keep mankind alive are recognized as staples. Among vegetables (excepting potatoes) six kinds play a more important rôle in our food programme than all the rest put together. Several of these six are represented in our daily bill of fare each day in one form or another.

It is only logical, therefore, that more than casual attention should be given to the cultivation of these stand-bys. In the next seventy pages each is dealt with as thoroughly as its importance deserves. To grow them will prove easy if simple directions given are followed.

All staples feel at home in most sections of the country and yield good crops providing that the soil is fertile and necessary attention is given to them during their growing season. If you grow nothing else, grow some of each group of the following six important vegetables. By doing so you will fill both individual as well as national needs.



BEANS—DWARF OR BUSH

BEANS are the easiest vegetable to grow in any carefully dug and raked garden. They thrive in most any soil.

How to Sow: Place furrows from eighteen inches to two feet apart, about two inches deep, and drop seeds four inches apart in the row. They will sprout and push through the soil in from five to seven days. Make the first sowing when the maple trees unfold their leaves—about the middle of May. The average packet of bean seeds (about a half pint) contains enough to sow fifty feet of row. A fifteen-foot row of any of the improved sorts recommended later will yield about twenty quarts of pods from the time the first pods form until the plants cease bearing. Ask yourself “how many beans do we want?” Then plan to secure the supply by planting at frequent intervals. Extra early kinds may be sown up to within sixty days of first frost.



THE CULTIVATION OF BEANS

AS A descendant of natives of India and arid America, beans need cultivation more than watering. As soon as the young plants develop the second pair of leaves, start to hoe them, pulling the soil slightly toward the rows. After every shower go over the patch with a handhoe or wheelhoe to break up the crust forming on soil, but *never* work over bean plants while leaves are wet with dew or rain. It spreads rust—a fungous disease that badly marks the pods and foliage with ugly brown spots and eventually causes the plant to die.

Weeding, hoeing, and hilling are the three main needs of beans. The principal reasons for hilling them are that it puts an extra deep dust mulch around the base of plants and it supports the plants, thus keeping pods off the ground. If an extra long drought retards development of the plants and watering becomes necessary, put the water *between* the rows, next to the plants, but do not wet the plants. The *roots* need the moisture.



PROVIDING A CONSTANT SUPPLY

A CONTINUOUS supply of pods may be secured by either of two methods. Early midseason and late sorts may be planted, at one time, which will yield their pods in succession. Or repeated sowings of an early kind may be made, providing the same kinds of beans all summer.

For an ample supply of tender stringless pods, sow two fifteen-foot rows every week up to middle of July. Early in the season, sow any kind. After July 1st sow sorts only that will come into bearing within sixty days after planting. Later maturing kinds bear longer.

To have perfectly stringless beans from early in July until frost try this programme of planting: Early in May plant a row each of *Bountiful*, *New Kidney Wax*, and *Sure Crop Wax*. Two weeks later plant a row each of *Fordhook Favorite*, *Full Measure*, and *Brittle Wax*. About June 1st repeat the first planting, following July 15th with a planting of *Hodson* and *Stringless Refugee*.



GATHERING THE CROP

BEAN plants will bear surprisingly large crops if properly handled and cared for. They will greatly reward the diligent gardener for any extra labor and care bestowed upon them. Sometimes, in particularly rich soil, the plants will be so large that they crowd each other in the rows and spread sideways. In such cases, drive short, stout stakes, ten feet apart, along the row and connect them with strings on both sides of row. This will make gathering easier and prevent injury to plants while cultivating.

Gather the pods while quite young, about four or five inches long. They are of best quality then, and free from fibre. Do not jerk the plants while gathering, but sever the stems of pods with finger nails. Gather frequently—the oftener you pick pods and prevent seeds from forming in them, the longer will the plants bear. Never pick beans while vines are wet for reasons given under “cultivation.”



No. 1

No. 2

GREEN-PODDED BUSH BEANS

THE Flat-podded "Snap-shorts."

The work of the modern hybridizer permits of no excuse for "stringy" beans in the home garden. Foremost among the flat green-podded sorts that may be snapped into short pieces without strings having to be taken off, is *Bountiful* (No. 2). It is a truly pedigreed sort that will bear its handsome six-inch pods regularly within sixty days from date seeds were sown and will continue to bear for six weeks thereafter.

Keeney's Stringless Refugee Green Podded is a most prolific sort with semi-flat, thick-fleshed, five-inch pods of light green color. It bears particularly well during the early fall from seeds sown during June. Ready for gathering in seventy-five days from date of sowing. *Hodson Green Podded* (No. 1) is the latest maturing sort of this remarkable trio, but also the most prolific. In eighty days from date of sowing it, an average fifteen-foot row will yield five quarts of pods; stringless while young.



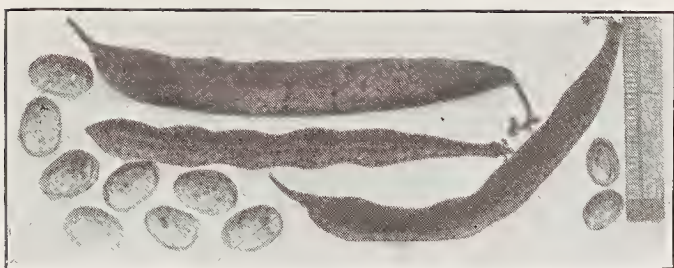
GREEN-PODDED BUSH BEANS

THE Round-podded "Snap-shorts."

These seemingly enjoy greater favor with the broad masses of planters than the flat-podded kinds because of their superior appearance and greater fleshiness. But the flat-podded sorts average longer and keep better because most of them have more fibre in the pods. There should be room for all in every home garden.

Stringless Green Pod, after a quarter century, is still the leading round-podded green variety. Ready in sixty days. Of wide adaptability to different soils, seasons, and climates. It is the popular favorite, with *Bountiful*, described on previous page, as a close competitor.

Fordhook Favorite (see illustration) is a white-seeded *Stringless Green Pod* which bears exceedingly handsome pods in great clusters within sixty days from date of planting. Average pod five and a half inches long; perfectly "saddlebacked," half inch in diameter. *Full Measure* reaches edible size several days later, but is longer.



GREEN-PODDED BUSH BEANS

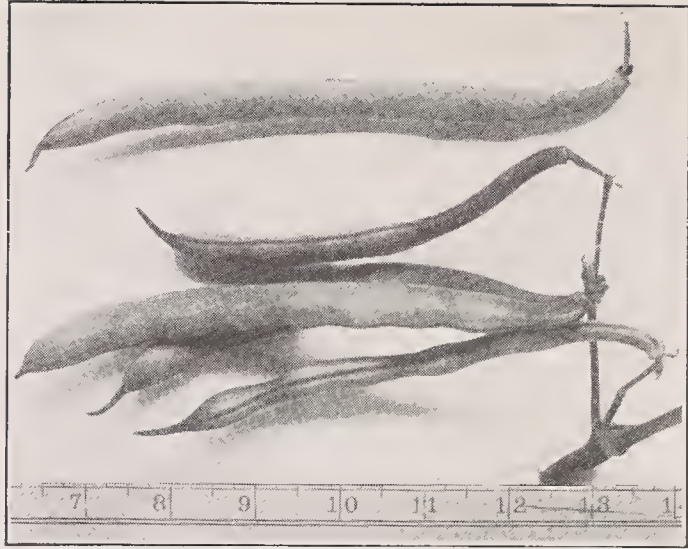
FOR use as shelled beans.

The following kinds are grown almost exclusively for the beans that develop in the pods, either in the dry or in the green stage. In cool northern sections, where Lima beans will not mature, they are gathered while green, shelled, and used alone or with corn as succotash.

Red Kidney is the large kidney-shaped bean famous throughout New England for baking. Ripens in seventy-five days from date seeds are sown. Pods tough and stringy.

Boston Pea Bean and *White Marrowfat* are both popular favorites yielding pure white beans of excellent cooking qualities. The last named develops tendrils, about twelve to eighteen inches long, often causing home gardeners to think they planted pole beans. Do not cut off the tendrils. Stringy.

Dwarf Horticultural (see illustration) is a large, plump, speckled bean of great favor around Boston. It is, perhaps, the heaviest yielder of all, ripens the crop in eighty or eighty-five days, and has by far the handsomest pods. Picked within the four-inch stage they may serve as "snap-shorts."



WAX-PODDED BUSH BEANS

THE Flat-podded Kinds.

Wax or yellow-podded beans are unquestionably handsomer in appearance when served in certain fashions. As to the relative quality of wax- and green-podded sorts, even experts disagree. Wax-podded sorts are perhaps of milder (or less) flavor than the green-podded.

Burpee's New Kidney Wax (No. 1) surpasses old *Wardwell's* in every way. Pods straight, six and a half inches long, half inch wide, light yellow, perfectly stringless at all stages. Ready in sixty days after sowing and good for six weeks thereafter. Color, light yellow.

Sure Crop Wax (No. 2) is a most bountiful yielder somewhat resembling *New Kidney Wax*, but the seeds are black, pods slightly thicker and more generally borne in clusters. Ready in sixty-four days after planting and the dark yellow pods are produced until frost.

Hodson Wax is the yellow-podded brother to *Hodson Green Podded* described on page 53. Both are alike in season of bearing, heavy yielding qualities, and stringy character when old.



WAX-PODDED BUSH BEANS

THE Round-podded Kinds.

To those who can see beauty in a humble vegetable few sights are more pleasing than a panful of symmetrically curved, saddlebacked wax beans, full of snap and flesh and juice! The round-podded sorts unquestionably contain more water than the flat kinds and are the easiest to get ready for the table.

Brittle Wax (see illustration) may be considered the pinnacle of perfection of those types of beans known to many as Prolific German Black Wax, Round Pod Kidney Wax, and others. Ready in sixty-five or seventy days and bears for six weeks thereafter.

Pencil Pod Wax is of the Prolific German Black Wax types, but of a far greater adaptability to different soils. Pods average slightly shorter (about five inches) than those of Brittle Wax, but are produced in larger clusters.

Keeney's Stringless Refugee Wax is the brother to the green-podded type described on page 53.



GROWING BEANS ON THE PACIFIC COAST

THERE is no difference in any of the essential details in growing beans as given on preceding and following pages, whether practised in the East or on the Pacific Coast. On the coast proper seeds may be sown between May 1st and 15th while in the interior lowlands of central and northern parts two weeks later proves a safer time.

Beans are a profitable garden crop everywhere. On the interior mountain slopes with western exposure they do not thrive so well, because of prolonged drouths. In sections visited only by light frosts or none at all some of the bush beans assert their perennial nature and bear continually.

The Golden State is the greatest Lima bean producing section of the world and two counties in the South furnish the bulk of the crop. All the varieties of beans recommended under the different chapters are perfectly suitable for the Pacific Coast.



THE POLE BEANS

THESE differ from the dwarf or bush kinds by growing long vines which readily cling to poles if encouraged by early tying. They should not be sown until the soil has become thoroughly warm. Instead of planting in rows, the common practice is to set the poles about three feet apart each way. Then build hills around the poles, about four to five inches above level of soil and twelve to fourteen inches in diameter. Into these hills the beans are placed, within an inch of the pole, about two inches beneath the surface, four or five to the hill. Later on, reduce the number of plants to three per hill.

From seeds sown end of May the first crop of pods may generally be gathered end of July. Since pole beans are much more prolific than the bush varieties, about thirty hills will provide an ample supply of pods for average use.

Few varieties of pole beans are perfectly stringless at all stages of development, and all should be gathered while quite young and tender.



TO GROW POLE BEANS SUCCESSFULLY

POLE beans grow much larger plants than the dwarf kinds and bear larger quantities of pods in fertile soil. It pays, therefore, to liberally enrich each hill with a shovelful of well-rotted manure or humus.

The seedlings generally appear within six days after seeds are sown. Two weeks later the young plants should be tied gently to the poles with raffia or soft rags. In common with all other bean plants, pole beans do not thrive if they have their root system disturbed. Weed the hills by hand, therefore, using the hoe between hills only, as shown on page 59.

Since pole beans require a long season to reach edible size, successive plantings are seldom advisable. When picking them, do not jerk the plants—cut the stems. Do not let them grow as large as shown in picture opposite—pick while small and enjoy real quality.



POLE BEANS—GREEN-PODDED KINDS

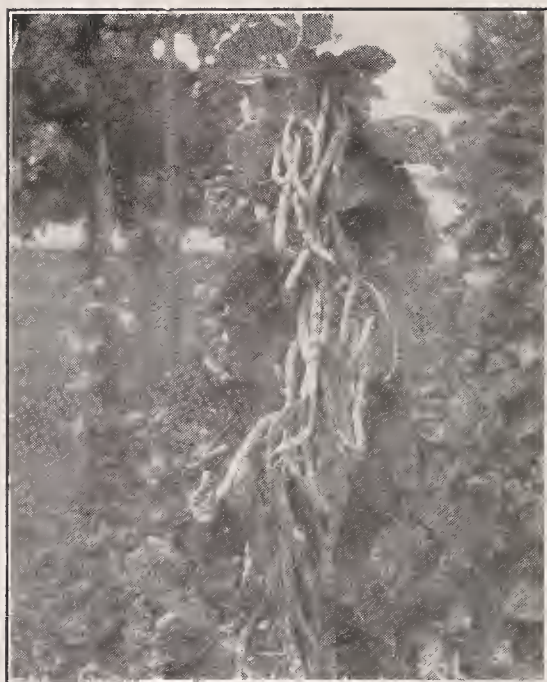
AS AMONG the bush beans, the pole beans supply us with both green and yellow or wax-podded kinds, to please our fancies. Most pole beans produce pods much longer in size than bush beans. This is particularly true among the green-podded kinds.

Old Homestead or *Kentucky Wonder* is the most popular and, perhaps, most prolific, considering size of pods and number of pods per plant.

Powell's Prolific bears shorter pods, but is earlier and produces more of them.

McCaslan, as illustrated herewith, is an extra early kind of exceptional size and stringless until it becomes six inches or more in length. Within sixty days from date of planting in warm rich soil it will bear two quarts of beans per plant.

Lazy Wife is another prolific sort bearing great clusters of medium-sized pods that are perfectly stringless while young.



POLE BEANS—WAX-PODDED KINDS

FOREMOST among these ranks *Golden Cluster Wax*, deservedly popular for every purpose in the home garden. It is a dependable cropper on all kinds of soil. Where season and soil are favorable for strong development it bears pods in clusters of two and four large pods, six to eight inches long by three-quarter inches wide. They are perfectly stringless while young, flat and vary in color from creamy white to lemon yellow. Ready for use in seventy-five days. Dry beans are pure white.

Kentucky Wonder Wax, as illustrated, is the yellow-podded companion to Old Homestead or green-podded Kentucky Wonder. It has all the admirable qualities of that popular favorite, and matures a week earlier.

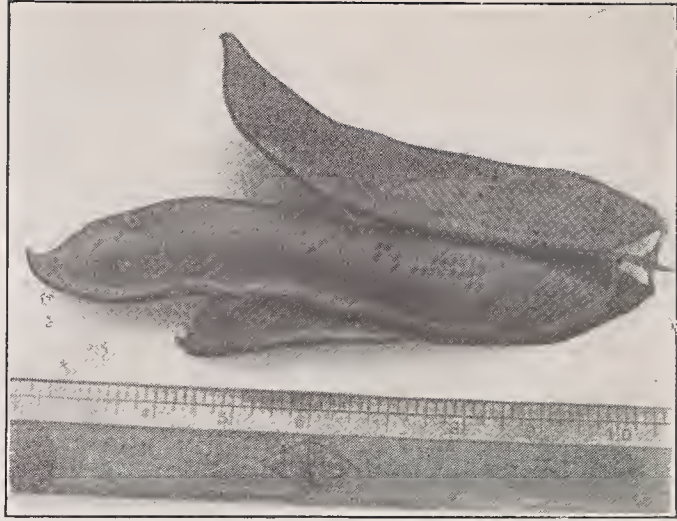
Golden Carmine Horticultural is a popular old variety in New England and other sections where the seasons are short and cool. The pods are hardly fit for use, being tough and stringy; but the handsomely marked dry beans are splendid for winter use.



THE BUSH LIMA BEANS

NEARLY thirty years ago a Lima bean grower in California discovered, in a field of pole Lima beans, a chance seedling of compact growth, about two feet high. From this derived the large-seeded bush Limas. While they do not yield as big crops as the pole or climbing varieties, they have the advantage of bearing earlier, occupying less space, and requiring less labor and attention to be grown to maturity.

Bush Lima beans should be planted when both soil and weather have become thoroughly warm—say June 1st in the latitude of New York City. Plant the seeds in rows three feet apart, with eight to eighteen inches between the seeds according to the fertility of the soil; closer together in poor soil, more apart in rich ground. Make furrows two to three inches deep and place seeds eye down in the rows. If this point is disregarded, the young seedlings are apt to “break their necks” in heavy soil, trying to push through.



BUSH LIMAS—BEST KINDS

THE earliest of all is *Henderson's Improved Bush Lima*, which is of the type known in the South as *Sierra* or *Butter Bean*. Its one drawback is its exceptionally small size, pods containing but three beans each. However, it is most dependable under widely varying conditions of soil and season.

Burpee's Bush Lima is the standard and most widely grown sort in cultivation to-day, bearing large quantities of pods with four beans each, in eighty-five days from date seeds are sown. *Dreer's Kumerle* or *Potato Lima* is a sort with short pods and thick beans. The plants are of much more spreading habit than any others described here. The prize for quality must be awarded to *Ford-book Bush Lima*, however, which bears thick pods with fat beans on the order of old-fashioned "potato lima" which are fully as large as those of *Burpee's Bush Lima*, much thicker through, and of green color. *Burpee Improved*, as illustrated above, is the largest podded sort of the dwarf type.



THE POLE LIMA BEANS

THE cultural requirements of pole Limas are very similar to those of other pole beans, as given on pages 59-60. Particular care should be exercised in planting the seeds "eye down," as with the bush Limas. The pole Limas, having larger seeds than the bush kinds, form seedling leaves that are correspondingly larger and more difficult to push through the soil. Half the failures in not getting a good "stand" of young plants are due to a disregard of this important point.

Pole Limas are very rank growers and will grow immense plants, if given a chance, to the detriment of the crop of pods. Seasoned growers curb the growth of plants by pinching out the tips of vines as soon as the plants reach the top of the poles. This encourages the development of the buds at the leaf joints and hastens the maturing of the crops. As a rule, pole Limas require a longer season than the dwarf kinds to form pods ready for use.



POLE LIMAS—THE BEST KINDS

AMONG these we find the same subdivision as with the bush type, namely, the very small, the fat or potato Lima, and the large seeded kind. The earliest and most productive is the *Sieva Pole Lima*, esteemed in the South as “butter bean.” Corresponding to the Kummerle or Dreer’s Bush Lima we have the *Challenger* or *Potato Pole Lima* in this class which is later but very productive and does well even where seasons are wet.

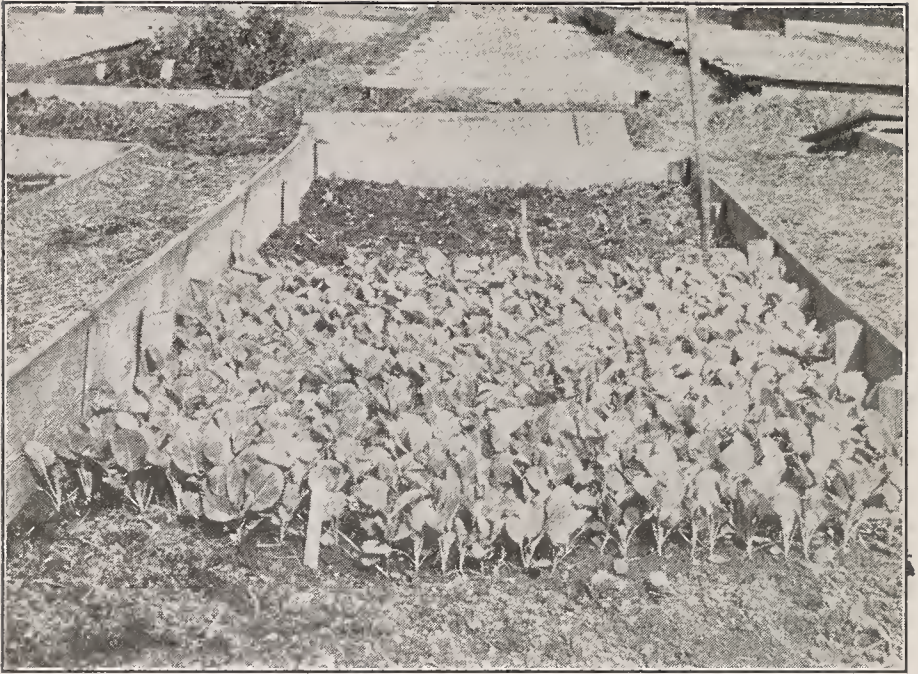
Easily the most prolific among the large white Limas of the pole type is *Henderson’s Leviathan*. While the pods are small, as compared with later sorts, they are borne in greatest abundance, are well-filled, and the beans are of good size. *King of the Garden* or Large White Lima is the most widely used in this class to date, but it is sure to be superseded by *New Giant-podded Pole Lima*, as shown here.



CABBAGE

THOSE who esteem cabbage may enjoy it the year around, and there are a great many kinds, of all shapes and sizes, as well as different color and flavor, to please a great variety of people. Cabbage is of greatest adaptability to various climatic and soil conditions. It thrives anywhere in this country, though to score best results attention must be given to varieties adapted to different soils and seasons.

As a rule cabbage is grown as an early crop for spring and summer use and as a late crop for winter storage. The methods of growing are the same everywhere, though the varieties grown early in the season differ greatly from those grown for winter storage. All cabbages may be divided into oblong or pointed-headed sorts, flat-headed or round-headed sorts, savoy and red cabbages. In all classes we find early and late varieties for different purposes.



CABBAGE—HOW TO SOW SEEDS AND WHEN

TO BEGIN with, cabbage needs rich soil. Whether seeds are sown under glass, for extra early crops, or outdoors, be sure to enrich the soil liberally with well-rotted manure or large quantities of humus. Cabbage seeds very much resemble turnip seeds and are of equally strong germination. Sown indoors or in the garden, they should be sown rather thinly and be covered about one-quarter to one-half inch deep.

For extra early crops seeds are sown under glass, in either hotbed or cold frame, in rows four inches apart. Plenty of ventilation is needed at all times to prevent plants from becoming spindly. For main crop outdoors and late winter cabbages, prepare a seed bed in the garden, just like for radishes, and sow seeds any time after middle of April.

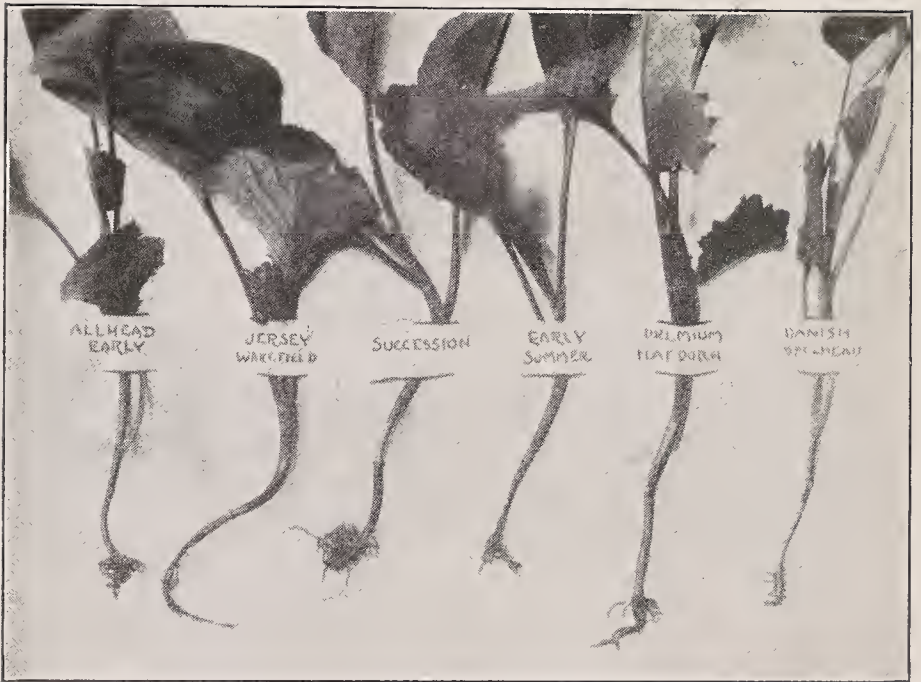
Cabbages are one of the crops that must be transplanted in order to do well. The average "packet" of seeds contains enough to grow from 300 to 500 plants.



CABBAGE—TRANSPLANTING AND SETTING OUT

THE best quality cabbages are those grown without a serious “check” or setback in their development. As soon as the seedlings make the second pair of leaves, lift them carefully and transplant (early in the season) into another bed, or seed flat, putting them four inches apart each way. Later in the season, from the seed bed in the garden, transplant into carefully prepared rows, setting the plants eighteen to twenty-four inches apart in the row, with two to two and a half feet between the rows.

When transplanting, let as much soil as will cling to the roots. It is best to water thoroughly the seed flat or bed before transplanting the seedlings. Unless the soil is moist, water the rows before setting out the young plants. The best time to do it is soon after a heavy shower and in the evening, so as to give the newly transplanted seedlings the benefit of a night’s respite from the hot sun.

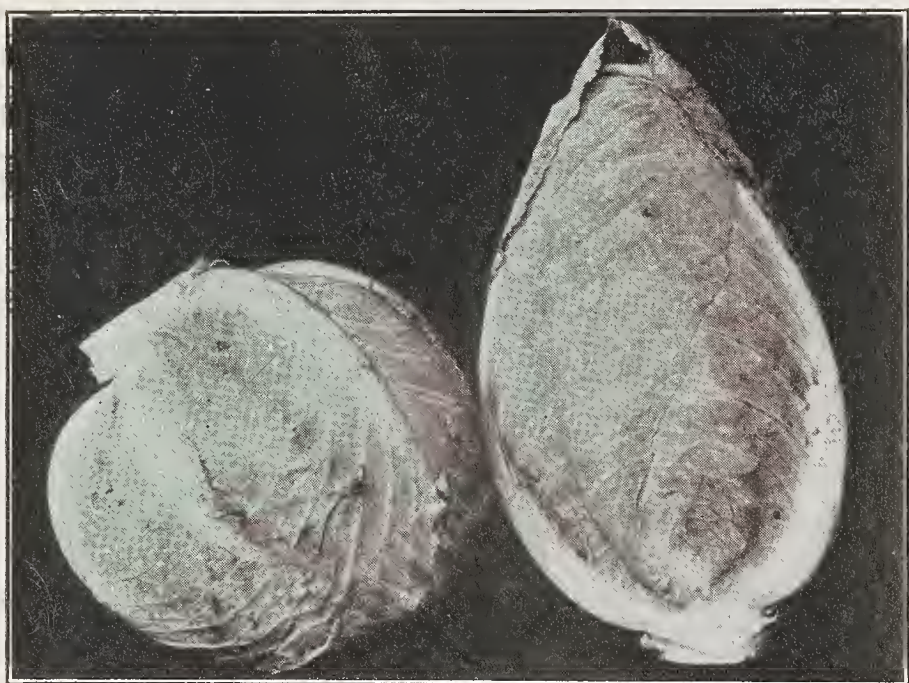


CABBAGE—PROVIDING A CONSTANT SUPPLY

ABOUT middle of September sow seeds of early kinds outdoors, in rows, quarter inch deep, ten to twelve inches between the rows. When October weather threatens their existence, transplant into a cold frame four inches apart each way. Give plenty of air and sunshine throughout the winter and just enough water to keep them in live, dormant condition. Set out at the first sign of spring, these will furnish the first cabbage of the season.

Early in March sow seeds of early and midseason sorts in boxes in the house or in a hotbed in rows about four inches apart. Transplant about four weeks later in other boxes or cold frame, four inches apart each way, to be set out into the garden by about May 1st.

Finally, sow seeds of late kinds by end of May, into your garden, thin out seedlings to stand four inches apart, and transplant by end of July into thoroughly prepared rows for a late crop.



CABBAGE—INSECT PESTS AND STORING THE CROP

THREE insect pests threaten the existence of every cabbage plant: the first one is the destructive little cutworm pictured on page 18. The second is the green plant louse or aphid, and the third one is the green cabbage worm which destroys the foliage.

Cutworms are combated most effectively by putting paper collars around the plants or by poison bait. Aphid may be fought by spraying the plants with a nicotine insecticide. Against the green cabbage worm use Arsenate of Lead or Paris Green in either powder form or as a spraying solution.

Should the heads begin to burst before it is time to take them in, push plants over to one side. This breaks some of the roots and checks development. Before putting the heads into cellar or pits, turn them upside down for a day to drain out all the water. Then put them in a cool, dry cellar or bury them in a pit upside down.



EARLY WHITE CABBAGES

TO HAVE early cabbage, it is absolutely essential to start with seeds of thoroughbred early kinds. In common with the late sorts, early cabbages are divided into flat- and round-headed sorts. In addition, the early class claims the Wakefield cabbages which are of pointed or oblong shape and the earliest of all to reach good size.

Early Jersey Wakefield forms heads five inches in diameter by eight inches long, within 100 days from date seeds are sown. (See illustration.) *Charleston Wakefield* is slightly later, but also larger. Foremost among the flat-headed early sorts ranks *Early Eureka* which matures about the same time as *Jersey Wakefield*.

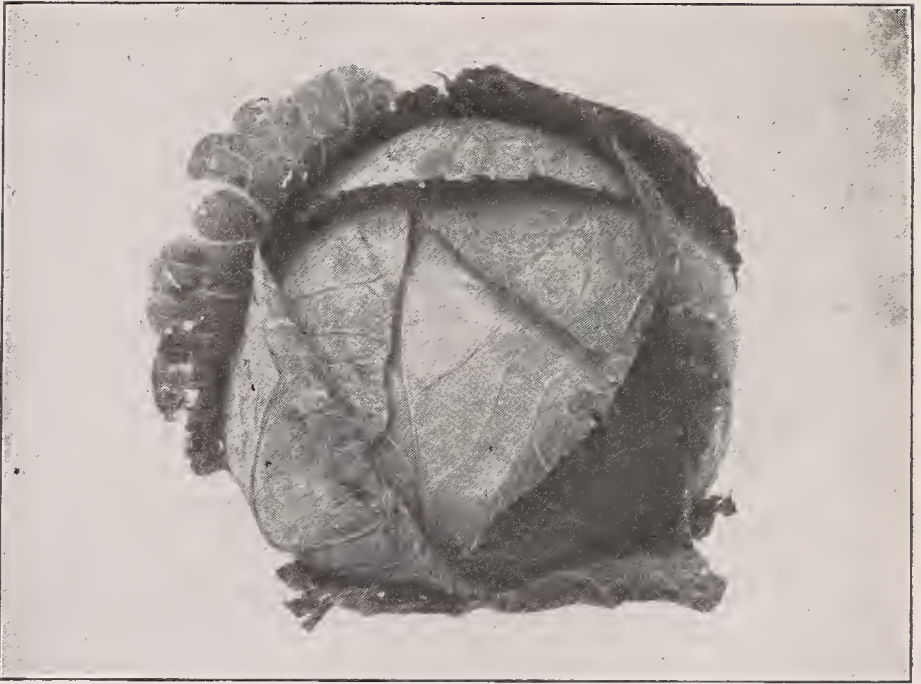
The prize for size, quality, and earliness, however, is justly claimed by *Copenhagen Market*, a perfectly ball-shaped sort introduced from Denmark about ten years ago. Heads, ten inches in diameter, averaging nine to ten pounds in weight, are produced within 110 days after seeds are sown. Outyields any other variety in this class.



CABBAGES FOR MIDSEASON AND LATE CROP

TO GATHER solid heads of good quality in late summer and early fall, from seeds sown in the spring, use either *Henderson's Succession*, *All Seasons*, or both. *Succession* is of somewhat flattened shape and reaches full size within 135 days from date seeds are sown. *All Seasons*, as illustrated above, comes a week to ten days later, is almost ball-shaped, and the trimmed heads average heavier. Both kinds are adapted to all sections, soils, and climate.

Among the late sorts suitable for winter storage, *Premium Flat Dutch* and *Danish Ballhead* are the two undisputed leaders. The former is by far the most widely known and grown because it thrives most anywhere. *Danish Ballhead* shows a distinct preference for heavy clay soil and does not do so well on thin land. The choice of good cabbages is great. The home gardener should best study the catalogs of the seedsmen in his section and profit by the experience of his neighbors.



CABBAGE ON THE PACIFIC COAST

THE perfect adaptability of cabbage to widely varying climatic and soil conditions is proven splendidly on the Pacific Coast. It thrives equally well under the influence of the open coast and on the lowlands and mountain slopes of the interior.

When to plant cabbage on the Pacific Coast cannot be determined by definite dates because of the great variation in temperature in even one and the same small section. On the broad principle that cabbage needs plenty of moisture, it is a winter crop, and generally speaking, most plants are set out in September.

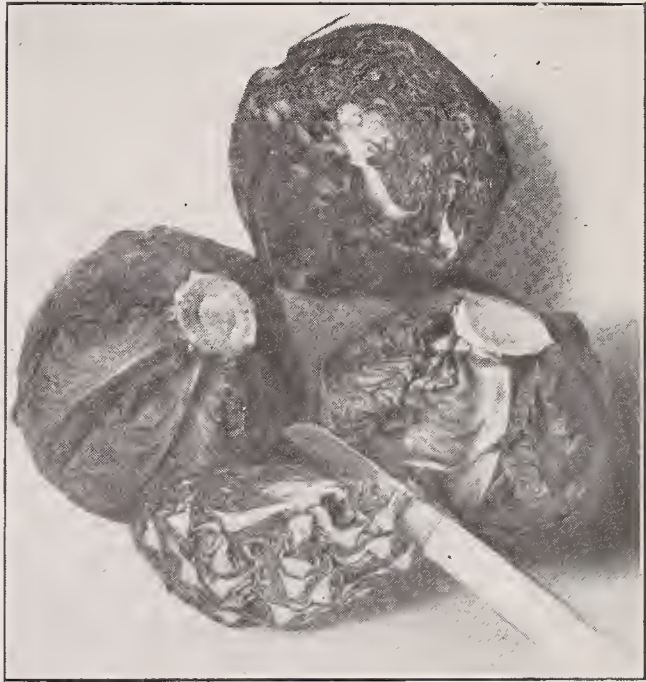
There are a few special strains of early and late cabbages that prove particularly suitable to growing on the Pacific Coast. Besides *Jersey Wakefield*, already mentioned, there is the late conical variety *Winnigstadt*. *Danish Ballhead*, as illustrated above, is widely grown under the name of *Hollander*. *Burpee's Surehead* is a strain of *Premium Flat Dutch* particularly liked in California.



THE SAVOY CABBAGE

A KIND of cabbage differing from that discussed on preceding pages by having distinctly "crumpled" or crimped leaves. The most important thing about savoy cabbage, however, is its superlative quality. Eaten while quite young (as *all* cabbages *should* be) Savoy rivals Brussels Sprouts in delicate flavor. It is of milder flavor than the white or common cabbages at all stages of development.

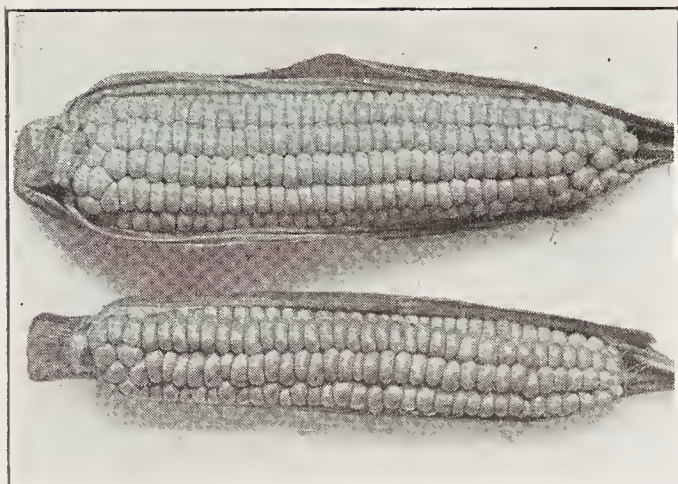
Savoy is distinctly a home garden cabbage, because its big, spreading growth makes it an undesirable type for market. Because of this, Savoy is not as well-known as its merits deserve it to be. But since the plants are easily grown, every home garden should have a row of Savoy cabbage, the general cultivation of which is the same as that of other cabbage. Plants should be set at least two feet apart each way. *American Drumhead Savoy* is the standard sort for all sections. It matures in 150 days from date seeds are sown.



RED CABBAGE

THE leading characteristic of this type is the deep, purplish red color of its foliage. This color extends clear through the heads, although the ribs and heart, when cut, are white, with a reddish tinge. Red cabbage is very popular in many parts of Europe, for the purpose of making "slaw." With us it is used chiefly by the foreign population of our great cities in the East.

While "cold slaw" made from red cabbage is decidedly attractive in appearance, yet it is of very much stronger flavor than white cabbage, and few Americans find it palatable. Cooked with meat and thoroughly steamed, red cabbage becomes a most acceptable dish. It is grown just like other cabbage. *Danish Round Red* (as illustrated herewith) is an early sort, forming small heads in 130 days from date of sowing seeds. *Mammoth Rock Red* requires 150 days for full development and may be considered the standard the world over.



CORN—SWEET OR SUGAR

TRUE quality sweet corn can never be bought on market. After the ears are “pulled,” the quality deteriorates very rapidly and by the time bought corn reaches the dinner table the kernels have generally lost their juicy sweetness.

The introduction of early, compact growing sorts makes the growing of sweet corn practicable in even small gardens. And it is a fortunate fact that, among these early sorts of small growth, we find some of the sweetest. A patch of six rows, each fifteen feet long, need not occupy more than fifteen feet square. Yet, in normal seasons, and planted to pedigreed strains, it should yield between ten and fifteen dozen ears.

Sweet corn, from the home gardener's standpoint, may be divided into kinds with white and yellow kernels. Among both we find early, midseason, and late sorts. The earliest will have ears ready for table in as short a time as seventy days, while the larger, later sorts, require ninety to one hundred days. The ears may be considered ready for pulling when the silk has turned black, as illustrated on page 99.



SWEET CORN—WHEN AND HOW TO SOW

NOTHING is gained by planting seeds before both ground and weather have become thoroughly warm. Sweet corn seeds are soft and will quickly rot in cold soil. The new seedlings are very delicate and cold weather checks their development so that later plantings often do much better than early ones. A pint of seeds is sufficient to sow seventy-five feet of row.

Two methods of growing corn are open to the planter: it may be sown in hills or in rows. The nature of the soil is generally the determining factor which way to grow the crop. It is better to manure poor soil in hills, two and a half to three feet apart and to plant five or six seeds to each hill, reducing the plants to the three strongest later on.

But in soil of fair fertility, the better method is to sow the corn in rows, about three inches deep, with two or three feet between the rows, depending on variety. Never plant one long, single row of a kind, but plant corn in "blocks" of several short rows, side by side.



SWEET CORN—THINNING OUT AND CULTIVATION

WHERE corn is sown in rows, which is by far the best way in the home garden, seeds should be dropped about three to four inches apart in the row. Under favorable conditions the seedlings appear in eight or ten days, when the first cultivation should be given by breaking the crust right next to the row with either hoe or rake. Sweet corn is reasonably drouth resistant so long as it is cultivated frequently. It has practically no insect enemies.

When the young plants have grown to be six or eight inches high, they should be thinned out to stand twelve to fourteen inches apart in the row, always saving the strongest. A month later the rows should be gone over again, this time to remove all side-shoots or "suckers." Then slightly hill the rows, pulling the soil to a height of four to six inches up the stalks, on both sides of row. This will act as a protection against high winds and as a dust mulch to retain moisture.

CELERY

THE use of celery as a vegetable and tonic is traceable to oldest times, since some of the old Greek poets, before Christ, considered it worthy of mentioning. It certainly is fact that well-grown and prepared celery is a most acceptable article of diet and *every American garden maker can grow it!*

While the seeds require a long time to germinate, the newly born plants have a strong constitution. They grow well so long as they have an abundance of water. As a matter of fact, unless, during dry months, on light soils you are prepared to supply an abundance of water, don't attempt to grow celery.

But if you do all this vegetable requires to make a good growth, it will reward you with a real delicacy. One type of celery has fleshy roots—it is called Celeriac, and we grow all too little of it. Complete information for growing both celery and celeriac to perfection will be found on pages 162 and 264-270.



GIANT PASCAL CELERY
A never failing winter sort

“BRUSSELS WITLOOF” OR WITLOOF CHICORY

(French Endive)

THOUGH known and cultivated in France and Belgium for years, it is only recently that this delicious salad vegetable has found a marked degree of appreciation in America. The delicate blanched “sprouts” are really the winter product of large chicory roots grown during the summer months in any garden. With the approach of cold weather these roots are dug up. With the tops removed, they are planted again in boxes in cellar or other frost-proof places. The resulting shoots furnish the salad.

The plants that make the roots from which witloof is forced are really rank-growing weeds. They thrive in any soil and need from June to November to reach full size. They require no particular attention excepting thinning, weeding, and cultivating like any other root crop. How any home gardener may grow this delicious, French *Barbe de Capucin* is described on page 206.



WITLOOF CHICORY OR FRENCH ENDIVE

CORN—SWEET OR SUGAR

IN AMERICA corn is King because it is a true American vegetable. Corn was cultivated as a food in Mexico and South America before Cortez landed. Sweet corn is mentioned as far back as the end of the Seventeenth Century as a favorite food of the Indians of western New York. It surely thrives better in our country than anywhere else. And in no other country does sweet corn reach the perfection as it does with us.

Plant the seeds when the maples are out in full leaf; gather the ears when warm summer suns transform soil fertility, heat, and moisture into the greatest food luxury that ever tempted a mortal's teeth. When and how to sow the seeds, which kinds to sow and why, as well as many other questions, are fully answered on pages 77-79 and 96-102.



PEEP O'DAY SWEET CORN
One of the earliest of good flavor

CUCUMBERS

WHO does not know the handsome, dark green fruits which, sliced and seasoned, furnish us one of the coolest and most refreshing summer salads? Cucumbers are a very easily grown vegetable. They require little or no care after the seedlings have outgrown the danger of being eaten by the little striped beetles which seem to prefer young cucumber seedlings to all other food.

Although the cucumber plants are of a creeping or spreading habit of growth, they are easily confined to small space by pinching out the centre shoot of vines. A dozen hills need not take up more than forty square feet of space and will yield a surprising amount of fruits. Keeping them picked before they reach full size will cause the plants to bear longer. Read pages 230-234 for easily followed directions how to grow lots of cucumbers.



DAVIS PERFECT CUCUMBER *None better for home use*

EGGPLANT

AS A native of tropical climates, Eggplants thrive best in those sections that enjoy a long growing season as well as real warm weather during the summer months. They grow to perfection from Florida north to Pennsylvania and west to Kansas, as well as on the Pacific Coast, but do not thrive so well farther north and in higher altitudes.

Eggplants are members of the "Nightshade" family (*Solanum*) and as such they are first cousins to the potato, tomato, pepper, etc. But they require longer than any of these to be grown from seeds to maturity and seeds must be sown in greenhouse or hotbed or they will not germinate well. Home gardeners should secure plants from reliable seedsmen or gardeners rather than to attempt to grow them from seeds.

Starting with sturdy plants, the growing of "Eggs" is not difficult if you observe the principal points of cultivation given on pages 271-273.

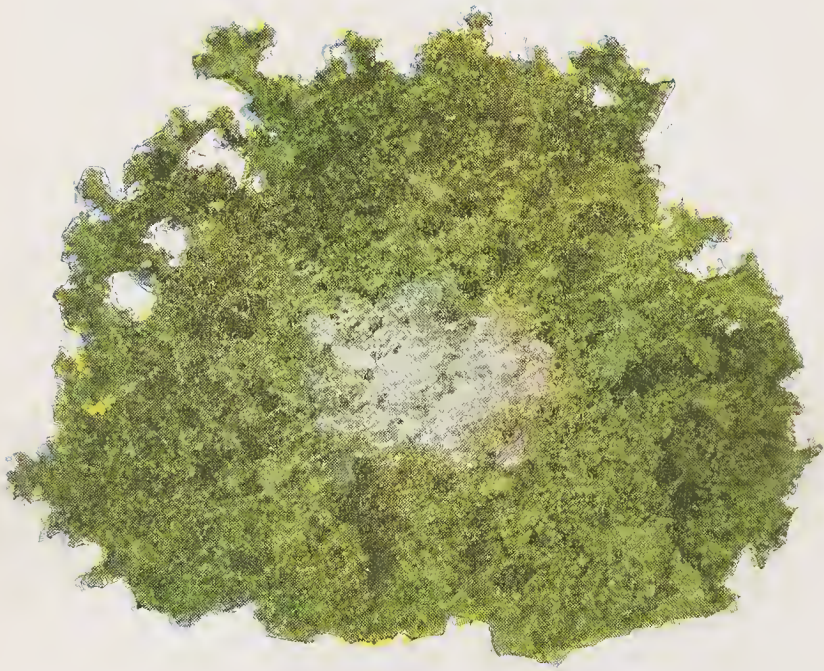


BLACK BEAUTY EGG PLANT
The finest sort for home use

ENDIVE

THIS highly esteemed salad plant deserves more general cultivation. It is a member (botanically) of the chicory family and, as such, is frequently confused with the French endive or witloof chicory described and illustrated on pages 82 and 206. However, witloof chicory is cultivated for the "forced" sprouts grown from roots during the winter, while endive, as described here, is the commonly met with salad plant, reaching full size within sixty days after seeds are sown.

Endive does well in any soil, but is distinctly a cool season vegetable. It reaches perfection in June from seeds sown in April and again in September from seeds sown late in July. To prepare it for use, the plants should be tied up in conical shape in order to blanch the heart. How to grow endive is described in detail on pages 209-210.



GREEN CURLED ENDIVE
A good sort for early or late use

KOHLRABI OR TURNIP-ROOTED CABBAGE

A MOST delicious member of the cabbage family grown for the fleshy portion of its stem which resembles a turnip-shaped root and forms on top of the ground. The general appearance of the young plant is that of a cabbage. Kohlrabi develops very quickly from seeds and should be used while the bulbous stems average from two to three inches in diameter.

In common with all other cabbages or "brassicas," kohlrabi is a cool weather vegetable and thrives best during early spring and fall. In Europe, where it has been cultivated extensively for centuries, the small, delicate sorts are used for human food, the larger, coarser sorts for stock feeding. As a "cost-of-living" reducer during the winter months, kohlrabi deserves more extensive cultivation. How to grow and use this elegant all-season vegetable is told on page 163.



WHITE VIENNA KOHLRABI
Earliest and choicest for home garden

LETTUCE

EVERYBODY knows lettuce, but few people can grow it to perfection. While it is one of the easiest vegetables to grow, to grow it *right*, attention must be paid to certain details that are fully explained on pages 211-220.

Lettuce is another vegetable that does not thrive well during the hot, dry months. It is not particular as to soil. The seeds germinate strongly and the young seedlings thrive vigorously. Within sixty days from sowing seeds you may cut heads like that shown herewith if you are willing to do certain work *when it needs to be done* !

The whole secret behind growing those perfect heads of lettuce you so much admire in your neighbor's garden or on the market bench is found in the proper "thinning" and timely "transplanting" as described in detail in the chapters on lettuce.



MAY KING LETTUCE
Of the earliest butterhead type



SWEET CORN—PROVIDING A CONSTANT SUPPLY

A REGULAR supply of ears that are “just right” may be enjoyed from end of July until frost, by either of two methods, viz., sowing early sorts repeatedly, or by sowing, at one time, several rows of several kinds maturing in succession. Perhaps the most satisfactory way is to combine the two methods.

In connection with the various sorts mentioned in the following chapters, the average time is given which each kind requires to form fully-grown ears. By deducting that number of days from the date of the first average frost in the different localities, every planter can figure how late in the season any kind may be planted.

A week or ten days' time may be gained early in the season by starting a few dozen “hills” in paper pots, in the house. About four weeks prior to the time when seeds may be sown outdoors (middle of May) put four seeds in each pot and water. Keep seedlings cool and set into the garden, pot and all, when danger of frost is past.



SWEET CORN—EARLY WHITE VARIETIES

UNDER favorable soil and weather conditions you may count on picking ears of either *Peep O' Day*, *Early Malakoff*, or *Early Mayflower* within seventy days from date seeds are sown. But do not expect the ears to be either of large size or good quality. They average six or seven inches long, are generally eight-rowed, and are of fair flavor. Planting *Early Dawn* at the same time will enable you to gather better filled, six-inch ears of superior quality with ten rows about a week later.

Ten days later, or in about eighty-five days from date of planting, *Pocahontas* gives home gardeners the first taste of real white sweet corn. Its ears are generally ten-rowed, average eight inches long, and the deep kernels are of very choice quality. This sort may be considered the latest of the extra early or the earliest of the mid-season sorts. Planting three fifteen-foot rows each of *Peep O' Day*, *Early Dawn*, and *Pocahontas* provides about fifteen dozen ears during late July and early August.



SWEET CORN—WHITE SORTS FOR MIDSEASON

THE advancing season brings both ears of larger size and kernels of better quality. A close rival to *Pocahontas* described on preceding page is *Metropolitan*, bearing ten to twelve rowed ears, ten inches long, in ninety days from date of sowing seeds. About the same time, *Original Crosby's* (ear to left above) bears its thick, eight-inch ears, with twelve to fourteen rows of broad, deep kernels of remarkable quality. But the prize for quality in this class is due *Howling Mob* which, in ninety to ninety-five days from date seeds were sown, surprises the planter with twelve-rowed ears nine to ten inches long.

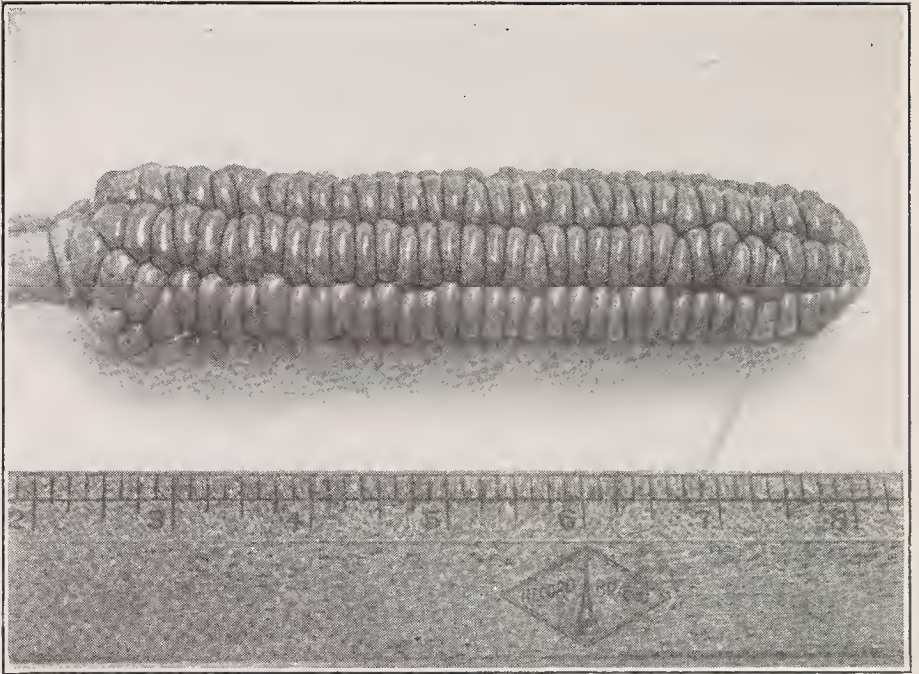
Considering general adaptability to widely varying soils and climates, *Howling Mob* must be considered the leading second early white-grained sweet corn of quality. (See ear to right above.) To get all the quality that is in any corn out of it, ears should be picked when a slight pressure of a finger-nail against the kernels bursts the skin and causes the milky juice to appear.



SWEET CORN—LATE WHITE KINDS

IN SECTIONS where frosts are apt to occur as late as June 1st and first visits are recorded as early as middle of September, planting of late sorts must be considered a risk. However, where one hundred days of good growing weather can be counted on and where space permits, home gardeners will do well to put in a few rows of both *White Evergreen* and *Country Gentleman*.

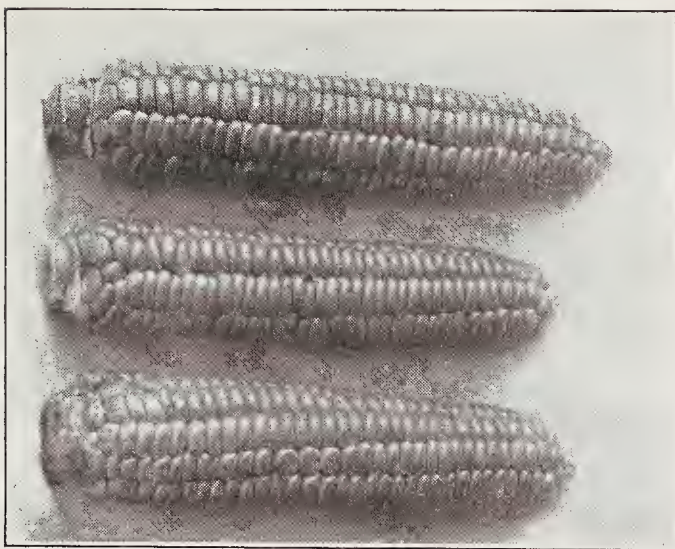
White Evergreen is by far the most thoroughbred strain of *Stowell's Evergreen* in cultivation to-day. (See ear to left.) With ears of great size (ten to twelve rows on cobs ten inches long) it combines a truly remarkable quality if ears are picked at the right stage. The average time for ears to reach full size is one hundred days. A week later *Country Gentleman* bears its zig-zag rowed ears (see two above) which grow about ten inches long. But they are considered the best flavored by those competent to judge, in spite of the fact that *Country Gentleman* is one of the oldest varieties in cultivation.



SWEET CORN—EARLY YELLOW KINDS

THE remarkable advance in popular favor made by the yellow-grained sorts of sugar corn during the past decade is one of the most pleasing proofs that, as a nation, we are beginning to appreciate true quality in vegetables. The flavor of pedigreed yellow sorts is undeniably better than that of the white kinds of similar season.

After fifteen years of most exhausting tests under widely varying conditions of soil and climate, the nation's critics acclaim *Golden Bantam* as the standard early yellow sort, of quality by which other kinds should be judged. A typical ear is illustrated above. *Golden Sugar*, a newcomer of slightly later maturity (eighty-five days), has a little larger ears, but compares very favorably in flavor with *Golden Bantam*. *Seymour's Sweet Orange* is ready in about ninety days after planting. Experts in some sections prefer it to *Golden Bantam*. It is particularly dependable in cool northern sections.



SWEET CORN—THE LATE YELLOW KINDS

BECAUSE the popular vote proves overwhelmingly in favor of *Golden Bantam* flavor in sweet corn, American hybridizers have been busy. During the last ten years scores of attempts have been made to produce new yellow sorts of distinct merit, a few of which are recorded here:

Golden Rod (see illustration) is the happy offspring of *Golden Bantam* crossed with *Stowell's Evergreen*. Within ninety-three days from date of planting it will produce eight- to ten-rowed ears, six to eight inches long, of a very worth-while quality.

Golden Cream affords the great combination of *Golden Bantam* blended with *Country Gentleman*. It requires ninety-five to one hundred days to bear its six-inch ears of the zig-zag rowed or shoe-peg type, but it will be found worth waiting for.

Carpenter's Golden Sweet is the latest, but also the largest, of the yellow kinds. Ears are twelve-rowed, and average seven to nine inches long.



SWEET CORN—AS GROWN ON THE PACIFIC COAST

ABOVE all, corn needs warmth and moisture, and where a proper amount of each is a reasonable certainty, corn thrives to perfection and delicious “roasting ears” play an important part at Thanksgiving and Christmas dinners.

The time of planting depends entirely on the condition of the soil and the weather. Generally speaking, it is planted to follow winter crops, like carrots and beets. Seeds are sown throughout May, June, and July, and peculiar local conditions determine entirely whether it is best to plant in hills or rows. Where hot, dry north winds sweep the section from north to south it is best to run the rows east and west. But hill planting permits of more thorough cultivation, which is most important.

In addition to all the varieties suggested on preceding pages, *Black Mexican* and *Morse's Golden Cream* (illustrated above) will be found to do splendidly.

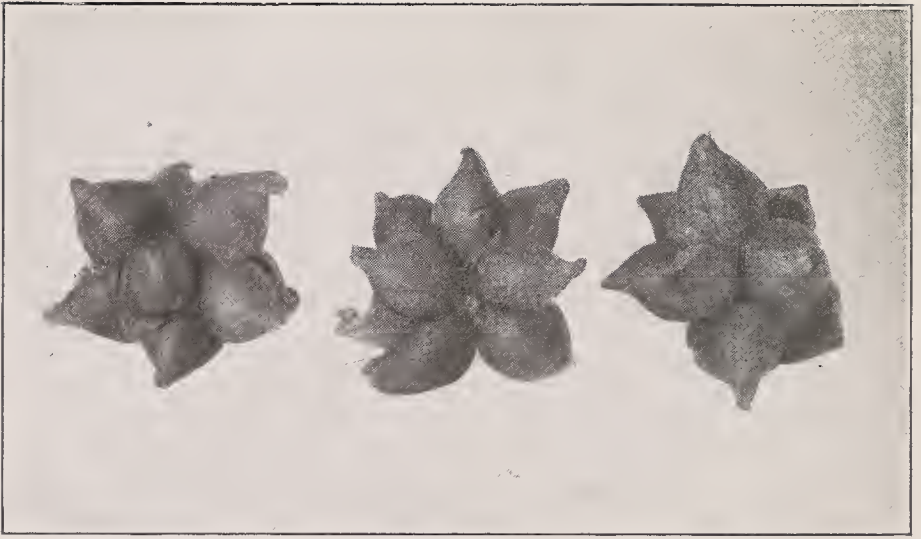


ONIONS

UNLIKE most other garden crops, onions thrive on the same piece of ground for a number of years. Should the soil become infested with root maggots, however, the rows must be shifted to some other spot. The best onions are grown on rich, black loam of a "mucky" nature. But under careful management, in the home garden, most any soil can be made to yield good crops if it is reasonably moist and the crop is weeded and cultivated regularly.

Heavy clay soil should have lots of lime, bone meal, and wood ashes added to it. Soil of a sandy nature should be given body by the addition of large quantities of well-decomposed manure, leaf mould, or humus. Never use fresh stable manure, because it breeds maggots.

Onions require several months to mature the crop and most kinds occupy the ground from spring until fall. Do not waste seeds by sowing them in poor soil. Newly broken land is seldom suitable for onion culture.



ONIONS—AS GROWN FROM SETS

THREE distinct types of onion sets deserve the consideration of the home gardener. The most widely grown are the common bottom sets which are really small bulbs of either white, yellow, or red onions, produced by sowing seeds thickly in the rows. The resulting stunted onion bulblets ripen in August. Stored through the winter, to be set out very early the following spring, they either furnish green "scallions" or can be grown to become large bulbs. They are generally planted early in April in rows, two to three inches apart, two inches deep, with ten to twelve inch space between the rows.

The other types of sets are either small bulbs formed on top of stalks, in place of the seeds, or small bulblets forming in the ground beside the mother-bulb. The best known of the last named is the potato onion set or multiplier. Of the onion forming in clusters (as illustrated) on top of stalk, the *Egyptian* or *Perennial Tree Onion* is the most popular. Both these types are very much hardier than the common bottom sets and, for best results, should be planted in the fall. They will then furnish the first green onions in the spring.



ONIONS—AS GROWN FROM SEEDS

BECAUSE of the ease with which large bulbs are raised from seeds in one season, few planters start with sets, excepting to secure extra early green onions. Five times as many onions may be grown from a packet of seeds at one-fifth the cost than from a quart of sets.

It all depends whether or not you are willing to do the work required to grow onions from seeds. For while, as described on pages 106-107, the various tasks required are simple enough, they are surely tedious and must be done *at the proper time*, or results will be disappointing.

There is practically no limit in choice of kinds you may grow. If small, white onions of very mild flavor are desired, you may count on gathering them in about three months after seeds are sown. The larger, yellow sorts are ready in 125 to 130 days from date of sowing. They will be of stronger flavor, but also better keepers. Among the red onions we find both extra early and late sorts. All red onions keep best but are strongest.



ONIONS—WHEN TO SOW SEEDS AND HOW

AS EARLY in the spring as the soil can be properly prepared (see page 103), dug and raked, make furrows about half inch deep (the rake handle will do) and place them twelve to eighteen inches apart. Where space permits, the wider distance is preferable, because it makes subsequent weeding and thinning out easier.

Sow the seeds thinly, about three or four to every inch or, on an average, one ounce to every 250 feet of row. Cover about quarter to half inch deep. The seedlings will appear in from ten days to two weeks, when the first hoeing should be done. It is not practical to make repeated sowings of onions for a continuous supply.

While the well-established young onion plant is fairly able to take care of itself, the seedlings need all the care and attention the planter can afford to give. Prompt and repeated weeding is absolutely necessary. Frequent hoeing must keep the soil loose so that air can penetrate it and the bulbs can expand.



ONIONS—MAKING SURE OF THE CROP

WHERE conditions of soil and season are favorable the seedlings will be four to six inches tall within six weeks after seeds are sown. They should then be thinned to stand four inches apart in the row and the soil should be thoroughly stirred between them.

The seedlings that are pulled out should be saved and the sturdiest transplanted into rows that are now bare, after bearing other crops. Cut back the tops to within three inches of base and set seedlings about three to four inches apart, being sure to first thoroughly water the bottom of each furrow.

After every subsequent weeding, which will be necessary about every other week, apply a complete fertilizer or wood ashes along each row, right next to the plants. Two handfuls to every fifteen feet of row will be about right and this should be kept up until middle of August. Do not hill onion rows. The nature of the plant requires that the bulbs expand partly above the ground.



ONIONS—HARVESTING AND STORING

WHEN the onion tops show signs of dying by turning yellow, pull up the bulbs and place them sideways in the rows to thoroughly ripen under the influence of light and air. Under normal conditions and during a dry spell, this requires about a week. Should a rain wet the bulbs, turn them over, after the upper half has become thoroughly dry. At the end of a week of such curing remove a good portion of the tops, leaving from four to six inches which should be allowed to dry gradually. Gather the bulbs in slatted crates or common market baskets, always keeping in mind that onions need plenty of ventilation in order to keep well. Do not store anything but solid bulbs. A good way to keep onions in limited quantities around the home is to tie them up in bunches as shown above and hang these up in the attic.

The best place to keep large quantities of bulbs is an airy storeroom or well-ventilated cellar where the temperature will not go beyond the freezing point during severe winter weather.



ONIONS—THE FOREIGN KINDS

WHILE for nearly half a century now we have been independent of Europe in the matter of onion seeds, there are still a few kinds which we import. Three distinct types are recognized and they are divided chiefly according to their usefulness. All are particularly valued because of their mild flavor.

First, we have the very small pickling onions of which *Early White Queen* or *Barletta*, as illustrated, is the most popular. Within eighty-five or ninety days it yields small one and a half inch to two-inch bulbs which are highly esteemed for putting up in jars. *Mammoth Silver King* is a very large, flat sort which, in good soil, grows from five to six inches in diameter. It requires a long season. *White*, *Yellow*, and *Red Bermudas* are the distinctly flat, thin-skinned, two and a half to three-inch bulbs that reach us from Texas and other Southern states during the late winter and very early spring. *Giant Spanish* or *Gibraltar* is the European type of our large "Prizetaker" onions.



ONIONS—AMERICAN WHITE VARIETIES

BECAUSE onions found a thoroughly congenial home in many sections of this country, American onions soon developed to a degree of perfection not commonly met with. *White Silverskin* or *Portugal* is a type of *White Queen Onion* described on page 109, almost as early, but grows to much larger size. One hundred days after sowing seeds bulbs measure two inches in diameter by one and a half inches deep through. *White Silverskin* is equally valuable for pickling while small, or cooking and slicing.

Southport White Globe is the handsomest sort in cultivation to-day. With symmetrical shape and beauty it combines good size, superb quality, and really remarkable keeping qualities for a white sort. In 120 days after seeds are sown the bulbs will average two and a half inches in diameter both ways. The skin is pure white; flesh is firm, mild, but of stronger flavor than that of *Silverskin* described above. If carefully cured and stored, *Southport White Globe* will keep well until January.



ONIONS—AMERICAN YELLOW KINDS

IN THESE we have the greatest general utility onions for all purposes. Among them we find early, mid-season, and late varieties of flat, semi-round, and globe shape. Yellow onions are of uniformly stronger flavor than white ones, but they also keep better.

Yellow Dutch or *Strasburg* is one of the oldest kinds in cultivation. Average time from seeds to ripe bulbs, 120 days. Bulbs two and two and a half inches in diameter, decidedly flat, skin light yellow. Flesh mild, firm.

Flat Yellow Danvers requires from 125 to 130 days to become two inches deep through by two and a half inches in diameter. It was the great general purpose variety until New England growers developed *Yellow Globe Danvers* (illustrated to right above) which is a much heavier yielder of handsome, coppery-yellow skinned bulbs, averaging two and a half to three inches in diameter within 135 days. *Ohio* and *Michigan Yellow Globe* are related strains.

Southport Yellow Globe is the largest and latest in this class, also the heaviest yielder. Average size three inches. Average time to mature, 140 days. The standard yellow in many sections. See bulb to left, above.



ONIONS—AMERICAN RED KINDS

EXTRA Early Red is an early-maturing *flat* sort, of particular value to gardeners whose soil is cold and wet. For this reason it does better in northern sections than most other kinds. Ripens early in August from seeds sown middle of April. Mild for a red onion.

Australian Brown, while not strictly a red sort, deserves to be classed as such because of its long keeping quality. The bulbs vary from coppery yellow to reddish brown, mature in 130 days, and with careful handling have been known to keep in good condition for a year. Average size two by two and a half inches in diameter.

Red Wethersfield is the standard purplish red sort in most sections. Requires 135 days to reach two and a half by four inches in diameter. Flesh white, with pinkish tinge, fine grained, of strong flavor. An excellent keeping quality surpassed only by the

Southport Red Globe, illustrated above, the largest, but also latest and strongest in flavor of the remarkable Southport Onions. Its globe-shaped three-inch bulbs ripen in 140 days from date seeds are sown.



ONIONS—HOW TO GROW EXTRA LARGE SPECIMENS

AMONG the kinds that will form bulbs of exceptional size, *American Prizetaker* and *Gigantic Gibraltar* are the two most popular. They form the large "Spanish" onions for which high prices are paid at fruit stands and here is the method by which they may be grown:

Late in February or early in March sow seeds thinly in a seed flat, in the house or direct into a hotbed. As seedlings appear, keep them cool, to encourage a strong, stocky growth. When three to four inches tall, thin them out to stand about one-quarter inch apart in row. If inclined to be tall and spindly, shear off tops to within three inches of base.

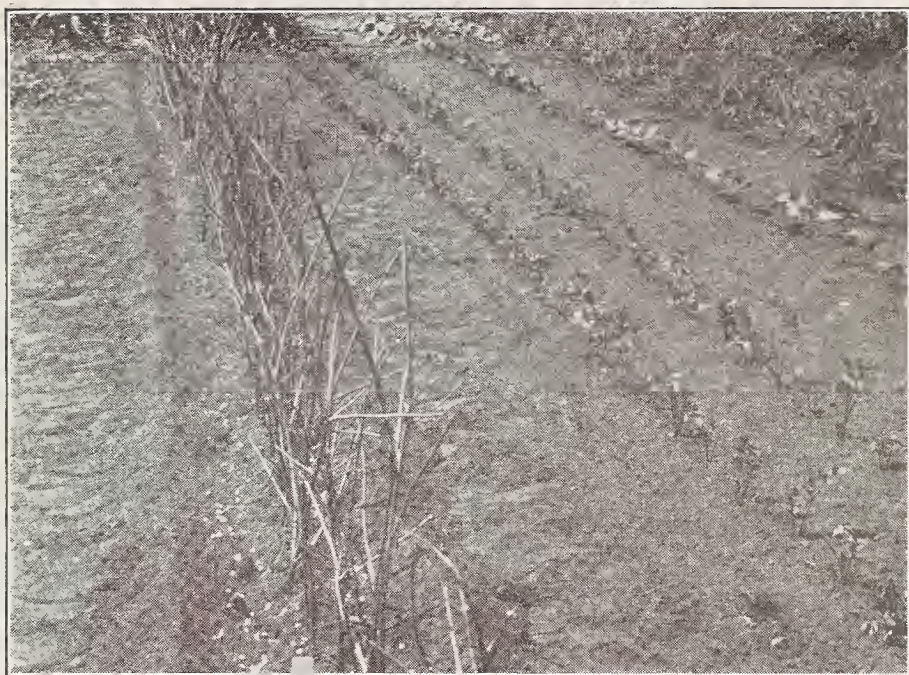
As early in April as garden can be made, transplant seedlings in rows, outdoors, five inches apart, with eighteen inches between the rows. Under favorable conditions bulbs averaging four to five inches in diameter should be harvested in August.



ONIONS ON THE PACIFIC COAST

UNRIVALED local conditions of soil and climate make most of the Pacific Coast particularly suitable for growing fine onions. Along the lower regions of the Golden State's coast valleys and on the moist river lands in the interior they thrive to perfection. Wherever a good supply of quickly available plant food is stored in the soil and plenty of moisture helps the plants, fresh, green onions may be had the year around and crops of 50,000 pounds of bulbs per acre are recorded frequently.

Where spring rains are light, seeds are generally sown early in February. Where late rainfalls are abundant, sowing may be deferred until surface cultivation has killed most of the annual weeds. The directions of how to sow and cultivate the crop, as given on pages 105-108, are applicable to Pacific Coast conditions as well. Loam, peat, and alluvial soils grow great crops of onions without further fertilization.



PEAS—WHEN TO SOW AND HOW

ACCORDING to the nature of the dry seeds, peas are divided into smooth-seeded and wrinkled-seeded kinds. Smooth-seeded peas are by far the hardiest and may be sown as soon as the ground can be dug. The young seedlings are not injured by frost or even snow. Because of this, in some sections it is perfectly practical to sow smooth-seeded peas in the fall.

The wrinkled kinds are very much more tender and cold, wet soil causes them to rot. Do not sow them until the ground can be put in good, friable condition which, in most sections, is about middle of April. Sow all peas in rows, two to three inches deep, scattering on average two to three peas to one inch or using one pint of seed to every thirty feet of row.

In the home garden of limited size peas may be sown in "double" rows, with about four inches of space between them. By placing the brush or trellis in the centre, a wide row is obtained which will yield the most pods.



PEAS—HOW TO CULTIVATE

DEPENDING on the height of the vines, peas should be given from two to three feet of space between the rows. The depth to which they should be covered depends on the nature of the soil: two inches is ample in heavy soil, three inches is better in light soil. Under normal conditions, seedlings appear one week after planting, when they should be hoed for the first time.

Pea roots need air, and weeds should not be allowed to handicap the development of the young plants. They grow rapidly and pods begin to form in from forty to sixty days after seeds are sown, depending upon varieties.

When planning for a crop of peas, remember that the average pea vine does not yield more than six pods and the average fifteen-foot row yields hardly more than eight quarts: five at first and three at second picking. These would hardly shell out more than one good mess for the average family. Therefore, if you are fond of peas, plant plenty.



PEAS—PLANTING FOR A CONSTANT SUPPLY

TO PRODUCE enough pods to give a family of five a fair "taste" of peas, at least six fifteen-foot rows should be planted. These would yield, under ordinary conditions, enough pods for three meals. To secure a full season's supply requires considerable space, and a constant supply is largely a matter of selecting sorts maturing in succession rather than to make repeated sowings of one variety.

The earliest peas to yield pods are the smooth-seeded kinds because they can be sown very early. But their season of bearing is short and supplementary sowings of both early and late wrinkled sorts are necessary for constant crops. The following chapters contain definite data about the time required by the different sorts to produce pods. By selecting early, mid season, and late sorts, every planter can work out a perfect programme of successive crops. If your space is limited, try *Little Marvel* (illustrated above), *Blue Bantam*, and *Potlach*.



PEAS—THE SMOOTH-SEEDED KINDS

FROM seeds sown middle of April, *Pedigree Extra Early* will be ready by middle of June. Under normal conditions, the twenty-four-inch vines will yield, on an average, five two and a half-inch pods containing five to six medium-sized peas each. A week later, *Prolific Extra Early* perfects a much more abundant setting of pods and the peas are of better flavor. Where earliness is not entirely the object, *Prolific Extra Early* will be found more acceptable than *Pedigree Extra Early*. Three-inch pods are borne on vines two and a half feet tall and the average fifteen-foot row yields eight quarts, in two pickings, a week apart.

Market Surprise, as illustrated here, is easily the best of the three, considering earliness, yield, and quality. It is not a strictly smooth-seeded sort, but may be planted as early as any of them. Average time to yield pods, fifty-five days. Pods are about three and a half inches long, well-filled, and the peas surpass those of either of above.



PEAS—EARLY WRINKLED KINDS

AMONG these we find sorts of truly superlative quality and of so thoroughbred character that they seldom disappoint. *Little Marvel* is all the name implies. Within sixty days from sowing seeds the sturdy eighteen to twenty-four-inch vines will bear, on an average, eight pods, produced in pairs. They are three inches long and are tightly filled with seven large peas of superb flavor, yielding about eight quarts of pods per fifteen-foot row.

Sutton's Excelsior (illustrated above) yields four-inch pods a week later. It grows slightly taller than *Little Marvel* and is, perhaps, the heaviest yielder of pods in this class, ten quarts for every fifteen feet of row being the average record. *Sutton's Excelsior* has light green pods and peas. About five days later sees *Thomas Laxton* at its best. This is the most thoroughbred American sort to date. Borne on three-foot vines, the pods somewhat resemble those of *Sutton's Excelsior*, but both pods and peas are dark green.

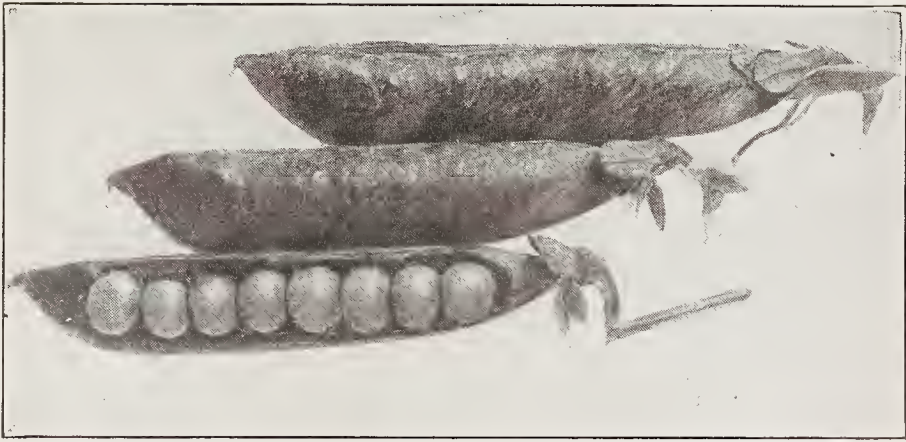


PEAS—WRINKLED, MIDSEASON, AND LATE KINDS

IN COMMON with the earlier kinds, the midseason and late varieties claim both sorts of dwarf and tall type.

The leading tall midseason pea is *Telephone*. Of the many strains available (*Boston Unrivalled*, *Duke of Albany*, and *Alderman* are all strains of it), *Alderman* is the most dependable. It grows about five feet tall, pods average four and a half inches long, containing eight large, dark green peas. The average yield for every fifteen-foot row is eight quarts, the first of which are generally ready eighty days after the seeds are sown.

Quite Content is the largest podded sort growing on a five-foot vine. It is about a week later than *Alderman*. *Potlach* (upper two pods) is the heaviest yielder of the early maturing late sorts. Ready in eighty-five days. *Dwarf Champion* and *Royal Salute* (lower two pods) are both good quality sorts of still later maturity.



PEAS ON THE PACIFIC COAST

THE chief enemy to peas is the dry heat so characteristic to the coast during the summer months. To escape it, recourse is taken to both early planting and irrigation. But best results are scored where peas are treated as a winter vegetable and, fortunately, they are quite hardy.

Most soils will yield good crops of peas and the methods of growing and cultivation, as described previously, are also adaptable to the Pacific Coast, though brushing is practised less. In soils that retain the moisture well peas sown in September will yield pods for Christmas dinner. In valleys of the interior, where heavy rainfalls and late rains predominate, sowings may be delayed as late as February.

In the moist lands of the coast valleys, where moisture is maintained by frequent cultivation and irrigation, peas will thrive quite late in the summer. The secret of success with peas on the Pacific Coast lies in early planting and a proper analysis of soil and seasons.

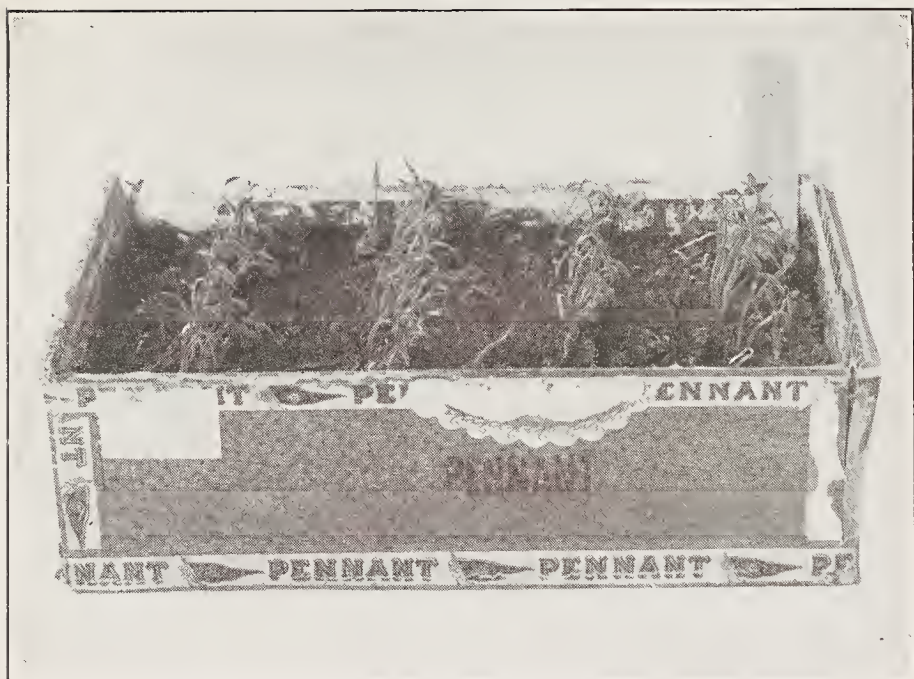


TOMATOES

IF THERE is one vegetable that deserves the title "year-around vegetable," it is the tomato. Three hundred and sixty-five days in the year it plays an important part in our daily menu. Whether we use it raw, cooked, stewed, canned, as a seasoning in sauces or as a relish, it is always palatable and nourishing.

The rise of the tomato within the last fifty years from the stage of a weed thought to be poisonous to the front ranks of garden plants is one of the most striking examples of horticultural progress in this country. Nearly five hundred differently named sorts confront the home gardener of to-day, making the selection of sorts best suited to individual requirements most difficult.

Fortunately, the different sorts of merit have very pronounced characteristics. They are either early or late, purple, scarlet, or yellow, flat or round, and dwarf or tall in habit of growth. How to choose and grow the different sorts is told in the following chapters.



TOMATOES, WHEN AND HOW TO SOW THEM

TOMATOES are a long season crop. The earliest kinds require at least 100 days from time seeds are sown to yield the first fruits. Since few sections can boast much more than 100 frostless days and nights, and the tomato, a warmth-loving plant, is very susceptible to frost, it is necessary to sow the seeds in the house, hotbed, or greenhouse in order to have plants ready for the garden when the weather becomes settled.

Sow seeds in any soil (a rich loam suits them best) any time after middle of February or not later than April 1st, if you would enjoy fruits from your own garden by middle of July. A seed flat or even cigar box, kept in a sunny kitchen window, will do. Sow seeds one-eighth to one-quarter inch deep and keep soil moist. The seedlings generally appear in ten days after seeds are sown. A packet of seeds provides all the plants needed in the home garden. The best way to provide a constant supply is to raise several kinds bearing in succession.



TRANSPLANTING TOMATOES

AS SOON as the seedlings make the second pair of leaves, or even sooner, if they are sturdy, transplant them into another flat or box, four inches apart, or in individual little paper pots, as shown on page 23. These are by far the most suitable receptacle for the plants because they afford ample room for development.

About middle of May, or as soon as danger of frosty night is over, prepare holes in the garden, two to three feet apart each way, digging them to a depth of twelve to fourteen inches and as much across. Put a shovelful of manure in the bottom of each hole. If the soil is a heavy clay, put a shovelful of ashes and cinders below the manure, to insure drainage and mix some with the soil as well.

Fill up the hole and set out the plants. If grown in small paper pots be sure to tear off bottom (see illustration) before planting. Do not disturb the sides—the cardboard will keep away the cutworms. Should the soil be dry, water before and after setting out plants.



TOMATOES—STAKING AND PRUNING

UNDER congenial conditions of soil and climate, tomatoes are rank-growing weeds. After they once take root, their principal aim seems to be to develop an immense plant. Unless this tendency is curbed, there will be mostly vines and many undersized fruits.

About four weeks after setting out the plants they will have reached a height of two to three feet, with five to eight branches, and will measure about two feet across. Then is the time to get busy and prune. From your lumberyard secure stakes (1 x 2 inches lumber will do) or use any poles on hand, about six feet tall. Drive these within an inch of base of plants, to a depth of one foot.

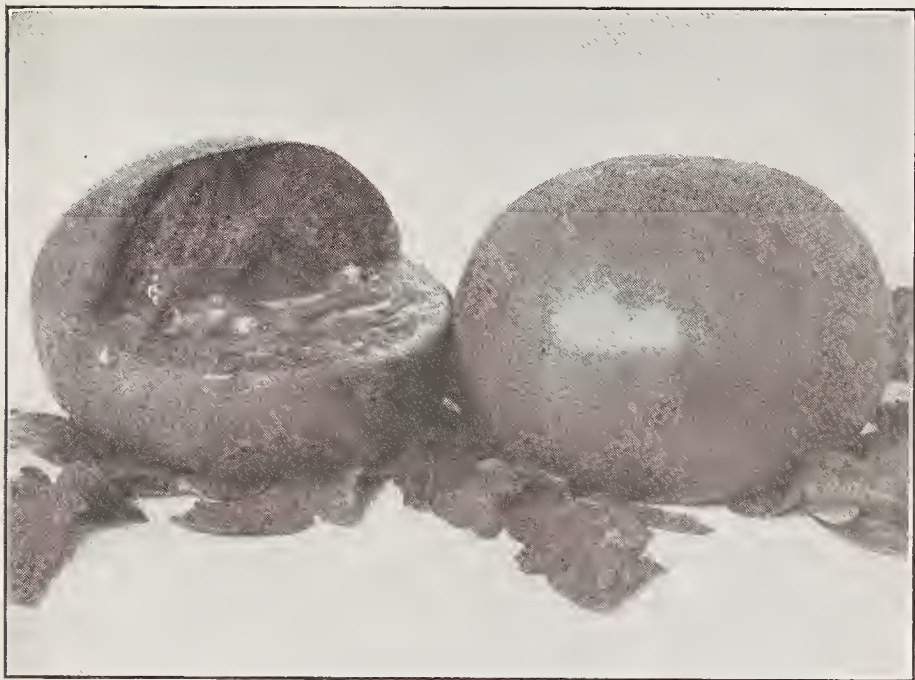
Then reduce the plants to three of the strongest branches. On exceptionally rich soil, four may be allowed to develop. Remove all "suckers" that develop at leaf joints and tie branches to stakes. By about August 1st the plants will reach top of stakes when the centre of each shoot should be cut out as well.



TOMATOES ON THE PACIFIC COAST

IN THE Southern coast countries and especially around Los Angeles, tomato plants bear the year around and the old plants are encouraged to yield late crops until the superior fruits from young plants in the north reach the market. Tomatoes thrive perfectly in most any soils of either the interior upland or river valleys as well as along the coast, so long as ample moisture is available.

Seeds are generally sown early in February, in the same fashion as described on page 123. On warm, sunny days the seed flat or box may be placed outdoors, to produce sturdy seedlings. The same methods of transplanting, as suggested on page 124, may be followed. Pruning is seldom practised on the coast. In sections where the drouth and heat become intense, the plants are generally set deeper than where moisture is abundant. All the pedigreed sorts mentioned in the following chapters are splendidly adapted to the Pacific Coast.



TOMATOES, STANDARD EARLY SCARLET SORTS

THE term "standard," as used here, simply stands for the common tomato plant, to distinguish it from the dwarf kinds described later. The scarlet or bright red sorts, as mentioned on this and the following page, are greatly preferred to the pink or purple kinds by some people. The scarlet sorts are of more pronounced flavor.

Spark's Earliana is the earliest sort on record, maturing medium-sized fruits in 100 days from date seeds were sown. Its season of bearing is short and the flavor is decidedly acid. *Early Sunrise*, which matures a few days later, has much smoother fruits that average larger. It is said to be a selection from *Earliana*. *Chalk's Early Jewel* (illustrated above) takes the prize in this class. In 110 days after sowing it yields large, smooth, handsome fruits that average three and a half inches in diameter by two and a half inches deep through. They are very solid, of splendid flavor. The average yield per plant is very high since *Chalk's Early Jewel* bears continuously.

MUSKMELON OR CANTALOUPE

THOUGH a native of Asia and Africa, this delicious vegetable fruit finds a most congenial home in America, where, under favorable climatic conditions and with thorough care, it develops qualities far beyond anything known to the old world. The fame of melons produced in certain sections of America has spread far beyond our boundaries. Melons have made Rocky Ford, Colorado, famous, and California's Cassaba melons bid fair to eclipse even Rocky Fords.

Where the sun shines warm and frost stays away between May 30th and September 15th, muskmelons may be grown from seeds sown outdoors. They will ripen in sections with shorter seasons where seeds are started under glass or in the house. One hundred to one hundred and forty days is the time required by muskmelons to reach maturity. The possibilities and limitations of muskmelon culture are fully explained on pages 235-240.



LONG ISLAND BEAUTY MUSK MELON
A dependable sort for all sections

WATERMELON

FOR thousands of years natives of Africa and tropical Asia have known watermelons and cherished the fruits of wild kinds as one of nature's gifts. Perhaps in no other country do they grow as perfectly as with us, and no country has paid more attention to developing this delicious vegetable fruit than our South.

Watermelons thrive anywhere where the temperature remains above sixty degrees for at least one hundred days. They are not particular as to soil, though a sandy loam suits them best and they reach near perfection on the newly plowed prairie lands of the Central West.

There are many kinds of many shapes and colors. The early sorts lack the sweetness of the later maturing varieties, but all are grown alike and require no particular care or attention or cultivation. How you can grow watermelons is told on pages 241-244.



KLECKLEY SWEETS WATERMELON
Large mid-season sort of superb quality

ONIONS

ONIONS as food for mankind can trace their usefulness back to the dawn of civilization. History records that laborers fed on bread and onions erected the Pyramids for the Pharaohs 4200 B. C. To this day onions are an important article of diet. They are used largely for soups and stews, and the foreign element of our great cities is more quickly incited to riots by prohibitive prices for onions than by the absence of potatoes.

Onions are very democratic. The seeds sprout readily, the plants thrive most anywhere in this country, in any soil, and form big onions in from 120 to 160 days from date seeds are sown if you follow the directions given on pages 103-114. There are sorts of many colors, for all purposes. The white kinds are the earliest and mildest, the yellow sorts are generally the heaviest croppers, and the red ones, of late maturity, are the best keeping kinds. The onion "sets" offered by seedsmen are really small onions, intended to produce green "scallions" early the following spring.



THE SOUTHPORT GLOBE ONIONS
In their early stage of development

PARSLEY

THIS delicate pot herb is highly esteemed for flavoring soups, stews, in connection with omelettes, and as a garnishing. A row of it should be in every garden, and its symmetrical growth often causes it to be found even in flower gardens, to the attractiveness of which it adds by its ornamental appearance.

Parsley will grow anywhere in this country. It is not particular as to soil, and centuries of cultivation in cool climates have caused this semi-tropical plant to adapt itself readily to our changeable climatic conditions. But one factor requires attention: parsley *must* be sown very early in the spring, while the soil is moist and cool. It requires from three to five weeks to germinate, and weeds should not be allowed to smother the seedlings. After parsley plants form the third pair of leaves they become healthy weeds, so to say. How to raise parsley in your garden and special hints as to how to have it the year around is told on page 225.



DOUBLE CURLED PARSLEY IN THE HOME GARDEN

PARSNIP

AS A native of Great Britain and Central Europe, the parsnip has been appreciated in Europe as a food for people and cattle for centuries. It readily naturalized and became acclimated in this country and is highly esteemed as a winter vegetable, although we do not appreciate its value as a rich food for cattle.

Parsnips are rich in sugar contents and it requires a rich soil to grow them to perfection. But they thrive in any soil, though a sandy loam causes them to be of best shape and appearance. As an all-season vegetable they occupy the ground from spring until fall, requiring from 125 to 140 days to reach full size for table use and winter storage.

They are easily taken care of, since frost does not injure the roots. It rather improves the quality. How to sow, grow, and cultivate parsnip roots is fully described on page 164.



HOLLOW CROWN PARSNIPS
As they grow in deep, rich soil

PEAS

AS ONE of the hardiest and most easily grown vegetables, these deserve a place in every home garden, particularly in view of the fact that real *quality* in peas can never be bought on market. However, it does not pay to grow them in *very* small gardens, because considerable space must be planted to them so as to enable one to gather pods sufficient for a meal at one picking. Besides, the crops from the space peas occupy are small when compared with crops other vegetables will yield from the same space.

Peas thrive in most any soil and climate. The seeds sprout vigorously and the plants grow rapidly. For the average home garden, the dwarf kinds are possibly the better. But the tall varieties bear longer and later and without some of them a constant succession of well-filled pods can hardly be had.

All peas thrive better if given brush or trellis of some sort to which to cling. Every phase of pea growing is thoroughly dealt with in pages 115-121.



THOMAS LAXTON PEAS
The most thoroughbred early wrinkled

PEPPERS

AMONG these we find two distinct types—the small ones largely used for seasoning and flavoring, and the larger ones, used for stuffing, as “mangoes.” The large kinds are descendants of a species from East India, while the smaller varieties originated in tropical South America. For this reason peppers are distinctly warmth-loving plants and require a long season of growth to reach maturity—from 125 to 150 days from date of sowing seeds.

For the average home garden a dozen plants are sufficient to provide all the peppers wanted, unless, of course, you are particularly fond of them. Since pepper seeds require very exacting conditions in order to germinate well, it is best, perhaps, to buy plants from a reliable seed or plant store. Other details regarding this particular member of the “*Solanum*” or Nightshade family are given on pages 275-277.



RUBY KING PEPPERS

PUMPKIN

AS THE largest and rankest growing member of the large gourd family, pumpkins rarely fit into the scheme of the average home garden. They should rather be considered a farm crop and as such they are generally grown in the cornfield.

Pumpkin plants are warmth-loving plants and will not do well where the nights remain cool throughout the summer. As natives of this country they thrive to perfection in all parts where frost does not disturb vegetation between the end of May and the end of September. Some kinds develop during a shorter growing season. But these neither grow very large nor is their flesh of the fine quality found in the choicer, later sorts.

Pumpkin plants require very rich soil or the crop will be undersized. The seeds sprout strongly in thoroughly warm soil and the plants thrive vigorously, smothering out all small weeds. How to raise prize-winning pumpkins is told on pages 245-248.



PUMPKINS OF VARIOUS KINDS



TOMATOES—SCARLET MIDSEASON AND LATE SORTS

LIVINGSTON'S FAVORITE, *Paragon*, and *Perfection* are all standard bright red sorts of uniform smoothness, good solidity, and of special value for slicing and canning. They mature in the order mentioned and are as thoroughbred as nearly half a century of careful selection can make any vegetable.

Livingston's Stone is the standard main crop sort throughout the country for both market and canning. Probably as many *Stone* tomatoes are grown each year as all the rest of sorts put together. *Matchless* is a strain of *Stone* selected for exceptional solidity. Both *Stone* and *Matchless* mature the first fruits in from 115 to 120 days from date seeds are sown. *Livingston's Coreless* must be considered the latest and most up-to-date variety in this class. It is of the most improved globe shape (see illustration), a wonder of solidity and of highest quality flavor, though about a week later than *Stone*.



TOMATOES—STANDARD EARLY PURPLE SORTS

ALL the pink or purple sorts are of decidedly mild flavor as compared with the scarlet kinds. This is true especially of *June Pink* which may be described as the pink brother to *Earliana*, among the scarlets. In southern New Jersey, the home of *June Pink*, it has the remarkable performance record of maturing fruits in ninety-eight days after seeds are sown. Its season of bearing is short.

Livingston's Acme, a variety of nearly half a century's standing, is still one of the most dependable early pinks with a longer season of bearing. In 108 days from date of sowing plants bear good crops of smooth fruits.

Livingston's Globe is the most pedigreed tomato evolved to date. It perfects handsome, globe-shaped fruits with smoothest skin 114 days after sowing seeds. There is no more solid, no heavier yielding, and finer flavored tomato than *Globe*, which seems to do well anywhere. It is the author's favorite and does particularly well when staked.



TOMATOES—LATE PURPLE SORTS

THOUGH not quite up to the standard of *Globe* described on preceding page, the title of best purple main crop sort cannot be denied *Livingston's Beauty* (illustrated above). Introduced thirty years ago, it is still the standard in many sections because of its great adaptability to different soils and climates. It matures in 115-120 days, fruits are flat but deep through, smooth, solid, and of uniformly good quality.

Trucker's Favorite is considered the *Purple Stone* by many in the East. It is a slightly later sort, compared with *Beauty*, and is at the height of its yielding season when *Beauty* declines. The fruits average alike.

Henderson's Ponderosa is the largest but also the latest in this class. It yields truly enormous fruits of remarkable solidity. But since many of them are either rough or heavily ribbed, the waste in connection with this sort is often quite large. However, late clusters often bear fruits of great size and beauty.



TOMATOES—DWARF SORTS

THESE differ from those described previously, being of a distinctly upright or dwarfed growth. Plants, when fully developed, will not exceed three feet tall and form perfectly symmetrical bushes, about two feet in diameter. Ordinarily, they require no support. But on rich soil and in windy sections it is well to tie them to short, stout stakes which keep them off the ground and prevent breaking of vines. The following are particularly useful for gardens of limited size.

Dwarf Champion is midseason purple, maturing small but smooth symmetrical fruits in 115-120 days. It is quite prolific, very meaty, and of good flavor.

Dwarf Stone, while not as large as *Standard Stone*, compares very favorably with the same in dependability, solidity, and matures at about the same season.

Dwarf Giant is the latest and largest of this pedigreed trio, fruits often averaging three and a half to four inches across by two and a half inches deep through. Purple.



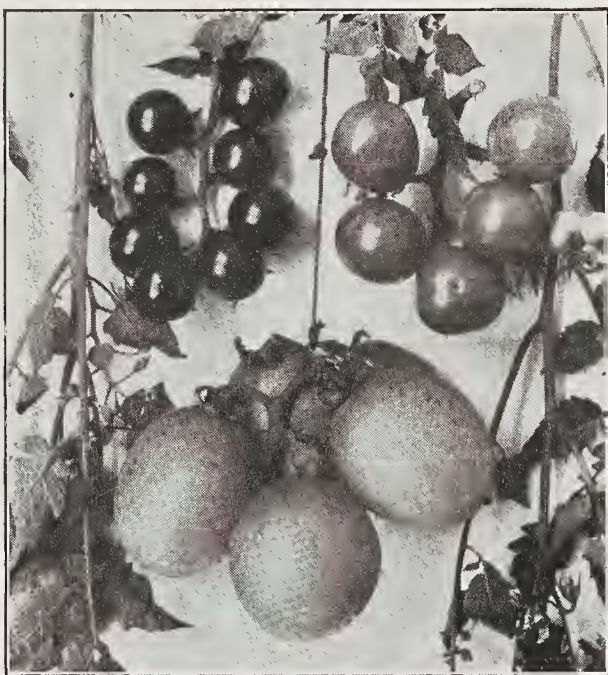
TOMATOES—SPECIAL SALAD SORTS

AMONG these two distinct types deserve consideration. There are the small-fruited red sorts best served quartered, as a salad, and the yellow kinds which lend more beauty than flavor to a dish of sliced tomatoes of the larger kinds.

Foremost among the small-fruited red sorts stands *Comet*, a phenomenal yielder of globe-shaped fruits the size of a large plum. It is very meaty and of fine flavor, ripening within 110 days. *Livingston's Hummer* grows beautiful clusters of ten to twelve globe-shaped fruits averaging as large as a hen's egg.

Among the different yellow sorts, *Livingston's Golden Queen*, after nearly forty years, still maintains unquestioned leadership. (See illustration.) It is a large-fruited sort, matures in 115-120 days after sowing and, like most yellow sorts, can claim but little flavor.

Livingston's Dwarf Yellow Prince is the yellow counterpart of *Dwarf Champion* among the purple sorts.



TOMATOES FOR PRESERVING

SINCE it is conceivable, perhaps, that all tomatoes at one time were very small, it is not strange that among the preserving kinds we find all the variations in color, shape, and type, encountered among the large-fruited sorts. Thus, in the *Currant Tomato* we have immense clusters of twenty to thirty fruits, red and small like a currant, with plenty of seeds, little meat, and a strong skin.

Red and Yellow Cherry Tomatoes, *Red and Yellow Plum* and *Pear-shaped* sorts prove also very useful for preserving. Finally, in *Livingston's Large Rose Peach* we have a sort that most nearly approaches some of the modern globe-shaped sorts in shape, but not quite in size or quality. It looks very much like a peach.

The dwarf type of tomato with very heavy foliage and of compact growth is represented among the small sorts by *Burbank's Preserving*, which is of the size of a cherry, very solid, and of pronounced flavor.



TOMATOES FOR GREENHOUSE CULTURE

TO FILL the gap in the supply of fresh tomatoes, existing between the time the outdoor supply ceases in the North and before the Southern produce reaches the market, large quantities of fruits are grown under glass. Seeds are generally sown during September and October, seedlings transplanted, set out two feet apart in benches, following methods described previously. It is customary, however, to train the plants to one single stalk.

Stirling Castle is a bright red, small-fruited English sort; *Comet*, as already mentioned on page 132, is an equally desirable sort of same color and time of maturity. *Bonny Best* is a large sort, of better flavor, though inclined to produce irregular shaped fruits in the first clusters. All of above three are ready in about ninety-five days.

Livingston's Globe is unquestionably the most dependable purple sort, maturing its perfect, globe-shaped fruits in 100 days. Its solidity, smoothness, flavor, and shipping qualities leave nothing to be desired.



ROOT CROPS AND THEIR USEFULNESS

IF, HERETOFORE, we have considered almost exclusively vegetables of which we eat the fruits, let us now turn to those of which we eat the roots. Some of these are produced above and others below the ground. The chief value of all of them lies in their extending the season of fresh vegetables (as compared with canned goods) from the time frost nips vegetation outdoors until the new vegetables of the following spring again are ready.

Root crops, such as are described in the following chapters, may become one of the weightiest factors in keeping down the high cost of living during the winter months. Moreover, physicians tell us that their generous use keeps the human body in good order. Best of all, they are easily grown, most any soil suits them, and they are generally raised as a second or third crop to follow others of short season and quick maturity.

Grow plenty of root crops. Their use is a good habit; their growing stands for gardening efficiency.



BEETS—THE QUALITY PRODUCT NOT OBTAINABLE ON MARKET

DURING their season, beets are easily the favorite root crop of America. That they are not used as extensively as turnips throughout the winter months is perhaps due to the fact that home gardeners are not familiar with the splendid keeping qualities of properly grown and stored beet roots.

Quality and flavor are most essential to make beets palatable. All turnips taste alike, as do carrots, parsnips, and radishes. But poorly grown beets may be bitter or woody or perfectly tasteless, so much so that their storing for winter use offers little temptation.

The following chapters will enable home gardeners to grow perfect beets. The use of pedigreed sorts remedies many faults. Their correct growing eliminates others. By growing a number of selected sorts, suitable for each individual's purpose, perfectly delicious beets may be enjoyed the year around.



BEETS—WHEN TO SOW AND HOW

SINCE beet seedlings are very hardy, seeds may be sown as early in the spring as the soil can be dug and raked. On the Pacific Coast beets are a year-around vegetable from seeds sown as early as February and as late as May.

Seeds are generally sown thinly, in rows one half to one inch deep, allowing eighteen inches to two feet between the rows. The seeds are composite kernels, containing from two to three sprouts each, and should not be sown any more thickly than one kernel to every inch. After covering, walk over the rows, as shown in illustration on preceding page, to firmly press soil in contact with seeds. This quickly causes the spongy kernels to rot.

The average packet contains sufficient seeds to sow twenty feet of row. Three ounces will provide all the beets required by the average family. A fifteen-foot row will yield about five dozen roots. By sowing seeds up to end of July a constant supply is easily secured.

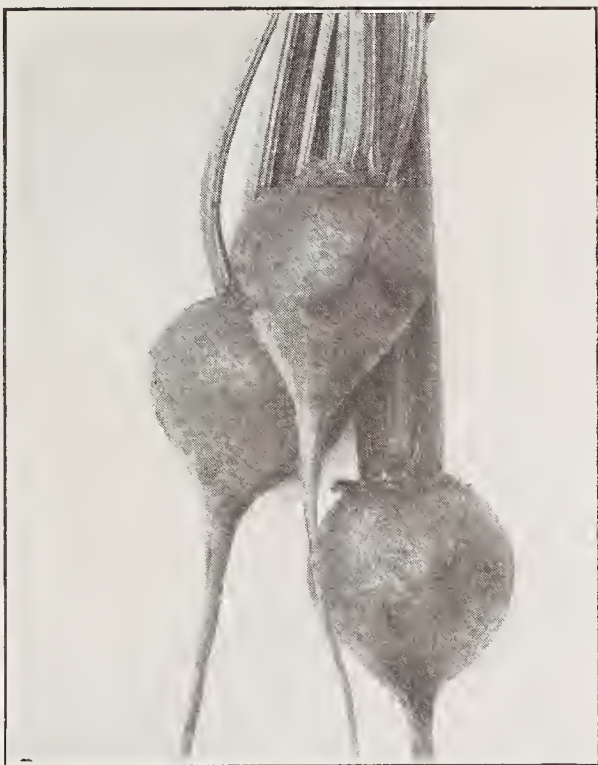


SOIL AND CULTIVATION

IN COLD, wet, heavy soils of a clayey nature, seeds should not be sown as early as in lighter, warmer soil. Moreover, efforts should be made to lighten heavy soils by adding large quantities of sand, ashes, strawy manure, or humus. The best roots are grown in muck or sandy loam.

The seedlings generally appear within ten days to two weeks. As soon as they are three to four inches tall, thin them out to stand four inches apart in the row. Those that are pulled up are easily transplanted as shown on preceding page. Slightly trim tops and roots and put seedlings four inches apart in rows, immediately after a rain or after thoroughly watering bottom of row.

Beets appreciate frequent and thorough hoeing. Having long tap-roots, the plants appreciate *deep* tillage, like most root crops. To enjoy their choicest quality, roots should be eaten as soon as they average two inches in diameter.

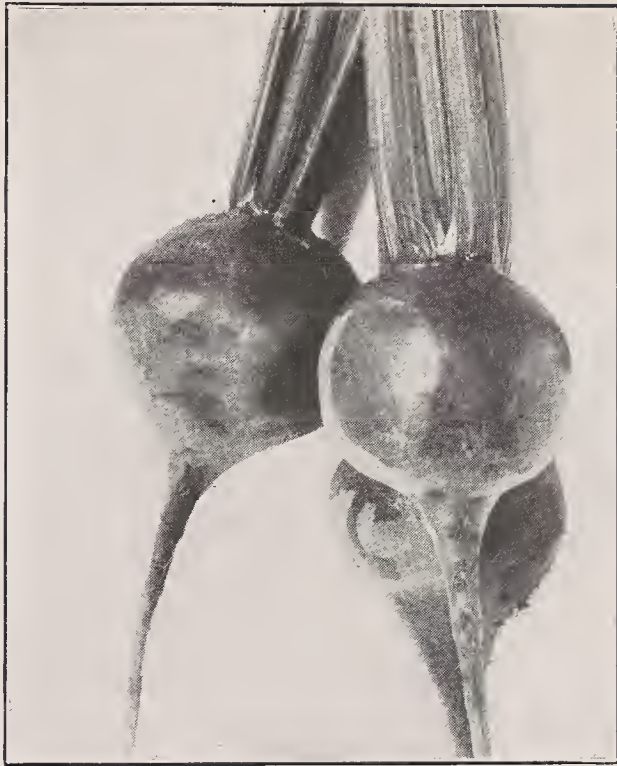


BEETS—PLANNING A YEAR-AROUND SUPPLY

THE earliest varieties of beets are ready within sixty days after seeds are sown. By planting later sorts at the same time, the season may be extended from three to four weeks. Taking April 15th as the average date to sow, this would provide beets from June until July.

With beets, the question of a constant supply is not solved by sowing seeds of sorts maturing in succession. It is rather necessary to make *repeated* sowings of both early and late sorts, to have them of good quality throughout the summer.

Early sorts sown as late as early in August will perfect roots of good average size before frost. But the best sorts for winter storage are the half long and long sorts which should be sown early in July to provide beets for winter. The long sorts are generally of very dark color and uniformly sweet quality.



BEETS—THE EARLY KINDS

PROVIDING the growing season affords a normal amount of moisture, *Eclipse* beets will perfect two-inch roots sixty days after seeds are sown. This does not mean that *every* root will be ready then, but rather that a dozen or twenty beets in a twenty-foot row will have reached the desirable size. *Eclipse* is one of the oldest, but also one of the most dependable sorts; top-shaped.

Extra Early Egyptian is a decidedly flat, turnip-shaped sort, as early as *Eclipse*, but not as desirable for the home garden. A strain of it called *Crosby's Improved Egyptian* is, perhaps, the greatest market variety in the country. It is ready for use a few days after *Eclipse*.

Detroit Dark Red, as illustrated, must be considered the ideal sort for the home garden. In sixty-five days after sowing seeds its perfectly ball-shaped roots average two to two and a half inches in diameter.



BEETS—LATE KEEPING KINDS

IN ARRANGING for a crop of beet roots suitable for winter storage, it is well to remember that the object may be attained by either planting late maturing sorts early in the season or early kinds late in the summer. Early sorts, properly grown in the fall, prove remarkably good keepers. *Detroit Dark Red*, especially, may be sown as a crop to follow beans, around middle of July.

However, where space can be devoted to later maturing sorts, either *Crimson Globe*, as shown on page 139, or *Black Red Ball* will be found excellent sorts reaching two and a half to three inches in seventy to eighty days. For winter storage, it is advisable to let the roots grow somewhat larger than two inches.

Half Long Blood, as illustrated above, and *Long Smooth Blood* are two still later maturing sorts, requiring from ninety to one hundred days to reach full size. Both have uniformly dark red flesh and keep all winter. Beets may be stored in frost-proof cellar, in boxes with sand or soil.



CARROTS

A VERY hardy vegetable, many of the hints and suggestions made in connection with beets being applicable to carrots as well. But their usefulness is greater. They provide many splendid dishes, boiled and served with cream sauce, or in soups and stews. Young carrots are a great delicacy if you value the sweet flavor peculiar to this vegetable. On the Pacific Coast they are particularly valued because of their drouth resistance. But to be of choicest quality, carrots, in common with all root crops, should have a steady and abundant moisture supply.

The average packet of seeds contains a sufficient amount to sow twenty to thirty feet. One ounce will sow about 200 feet of row. A continuous supply may be enjoyed by either sowing early sorts repeatedly or by sowing sorts maturing in succession. Carrots will remain in good condition for a long time, even after becoming overgrown. They will not turn bitter, like beets, but will split, when they become unfit for storage, but not for use.

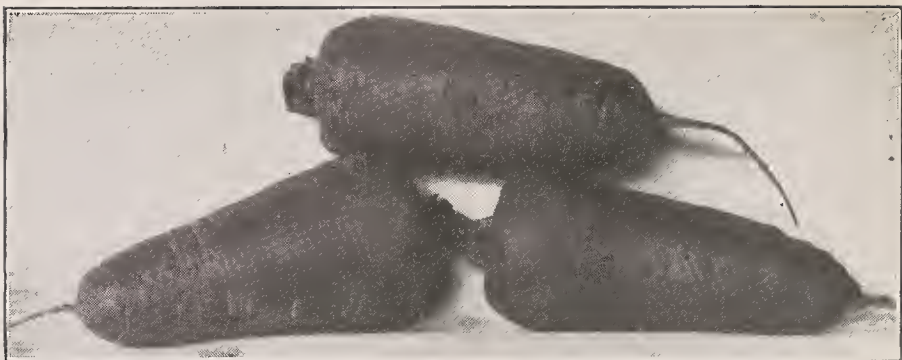


CARROTS—HOW TO SOW AND GROW THEM

ANY soil will grow good carrots. While the roots will be more shapely and smoother in a light soil of sandy nature, they are generally of better color and firmer texture when grown on clay soils.

Seeds should be sown as early in the spring as the soil can be dug and raked, in rows eighteen inches to two feet apart. Cover them about half inch in light soil, less in heavy clay. It generally takes ten days to two weeks for the seedlings to appear. Because the seedlings are very delicate and often find it difficult to break the soil's crust, experienced gardeners sometimes sow spinach seeds at the same time in the same rows with the carrots. The spinach will be harvested before carrots develop.

When the seedlings become three to four inches tall (see illustration) thin out the early small sorts to stand about two inches, the larger, later kinds about four inches apart in the row. Frequent and thorough hoeing is essential to growing good carrots.



CARROTS—BEST EARLY KINDS

OF PARTICULAR value to the home gardener, whose space is limited, are *Early French Forcing* and *Golden Ball*. Both make very small tops, on account of which the rows may be put as closely as a foot apart, with the roots about two inches apart in the row. The finished carrots of these two kinds average one and a half inches long by one inch in diameter and should be used quickly.

A week later, or in about eighty-five days, *Early Scarlet Horn* perfects two and a half to three-inch roots of about two inches in diameter at the crown. This is the most popular *extra* early sort, but must be used quickly since the roots are inclined to split badly as soon as they grow larger than above size.

Early Chantenay, as shown above, may be called the connecting link between the early stump-rooted and the later maturing, long kinds. Within ninety to one hundred days it produces three and a half to four-inch roots one and a half to two inches in diameter at the top. A very popular early sort with home gardeners throughout the country.



CARROTS—LATE SORTS SUITABLE FOR WINTER STORAGE

THE popular standard in this class is *Danvers Half Long*. (See illustration.) It does well in a greater variety of soils, perhaps, than any other kind, is a strong grower under all climatic conditions, and always of good color and flavor. Since the roots require about 120 days to reach full size, seeds should be sown from early spring up to middle of June, not later. Well-developed roots average six to eight inches long by two to two and a half inches in diameter, gradually tapering to a blunt point.

Improved Long Orange is the longest and latest sort, valued for its uniformly rich orange color and remarkable keeping qualities. Properly stored, it will remain in fine table condition from the time it is put in the cellar until the new crop of extra early sorts is ready to be pulled in the garden. It requires from May until September to reach full size. When storing roots, be careful to sort out all split, bruised, or insect-chewed specimens.



CELERIAC OR ROOT CELERY

A FORM of celery cultivated for its fleshy roots which, prepared as a salad, with French dressing, or served hot, with cream sauce, form dishes of rare flavor and great food value. Since, in general characteristics and growth, celeriac does not vary greatly from the common celeries, the seeds are started and plants transplanted in the same manner and at the same time as described on pages 264-266. However, celeriac requires deep and shallow cultivation and should not be earthed up.

To do well and develop worth-while roots, celeriac requires rich soil and plenty of moisture. Plants are set about six inches apart in the row, allowing two feet space between the rows. Frequent hoeing between the plants as well as between the rows is essential to good development of the roots. Celeriac is a long season crop, but as a rule the plants are started in a seed flat or box, to be transplanted, when large enough, into permanent rows early in July. Celeriac generally follows extra early crops like lettuce, peas, spinach, etc. *Giant Smooth Prague*, as shown above, is the most popular variety.



KOHLRABI, OR TURNIP-ROOTED CABBAGE

FOR a very early crop, seeds may be sown in a seed flat, indoors, about middle of March. When the seedlings make the second pair of leaves, thin them out to stand an inch apart in the row, about two feet between the row, and cultivate like cabbage.

To enjoy kohlrabi constantly, make repeated sowings outdoors during April and May. This provides tender two-inch roots throughout June and July. Kohlrabi does not thrive during the hot summer months. For this reason, additional sowings should not be made until end of July and early August. These will provide roots for fall use and winter storage.

Kohlrabi may be either boiled and served with a cream dressing, like turnips, or cooked and sliced cold, as a salad. *Early White*, as shown above, and *Early Purple Vienna* are both very delicate sorts, ready for use in sixty days after seeds are sown.

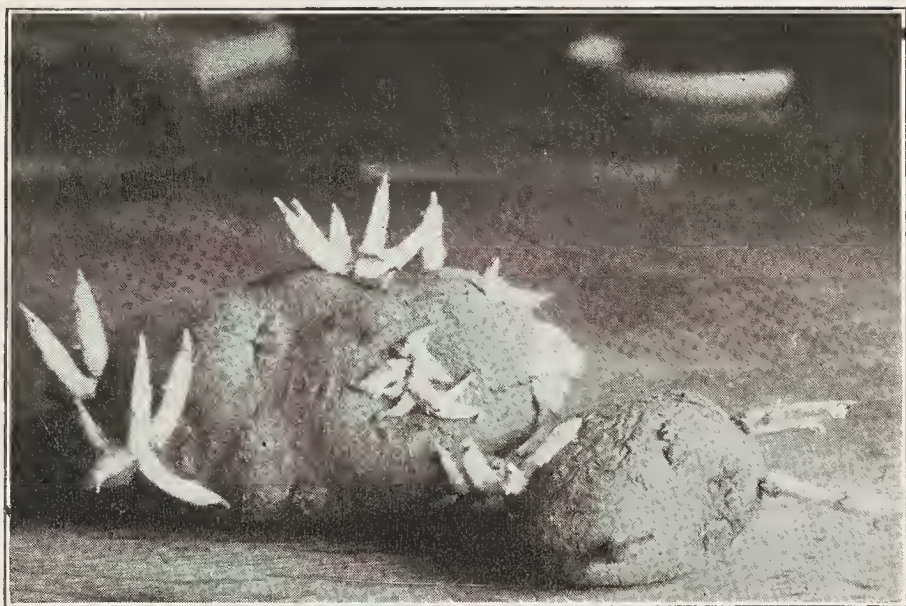


PARSNIPS

A VERY desirable fall and winter vegetable, easily grown in all soils and sections. Seeds should not be sown until the ground is warm, generally about middle of May. Cover about half an inch deep and allow eighteen inches to two feet between the rows. The average packet contains sufficient seeds to sow fifty feet of row.

As soon as the seedlings make the third pair of leaves, thin them out to stand four inches apart in the row. Frequent and deep cultivation is essential to satisfactory development of this crop.

Both parsnip plant and roots are quite hardy, and it requires the whole season (about 130 days) for the roots to reach full size. They may be dug in the fall and stored in a cellar, like other root crops, or left to remain in the garden, protected with straw or boards or both. Frost improves the quality of the roots, which remain in good condition until late the following spring. *Hollow Crown* or *Guernsey* (see illustration) is the favorite in all sections.



POTATOES

PPOTATOES can hardly be classed as a garden crop, yet their value as a food is so great that it is well worth while to grow them where space permits and the soil is of high fertility or can be enriched by liberal applications of either manure or fertilizer, or both.

Let there be no mistake about this—soil that is expected to yield a profitable crop of tubers must be rich or the crop is bound to be disappointing. Thousands of potato patches prove a failure every year because they hardly yield more potatoes than were planted. However, where soil and season are favorable, potatoes yield well enough to make their cultivation profitable.

One peck of seed potatoes, properly cut, will plant about 200 feet of row. The choice of varieties varies greatly in different sections of the country, almost every section having its favorites. Early, midseason, and late sorts are available, the last mentioned being the best keepers.



POTATOES—WHEN TO PLANT AND HOW

DEEP plowing or digging is essential to success with potatoes and, besides being well enriched, the soil must be well drained. As a well-known authority puts it—"potatoes do not like wet feet."

As soon as the ground can be prepared (middle of April in most sections and from February to May on the Pacific Coast), it should be laid out in furrows, four inches deep, allowing from two to three feet between the rows. For the early sorts, two feet of space between the rows is sufficient and two to three inches of soil to cover is ample, especially in heavy clay.

Start with carefully selected tubers and cut them, allowing one or two eyes to each piece. (See sprouted eyes on preceding page.) Experts differ as to how many eyes per piece should be allowed in order to cause plants to produce the largest crops. The pieces are put from six to eight inches apart in the row. Place them carefully, "eyes up," and remove all stones from the row when covering.



POTATOES—CULTIVATION AND FIGHTING INSECTS

AS SOON as the young plants push through the soil, which is generally about three weeks after planting, hoe the rows, carefully breaking the soil into fine particles all about the sprouts. When three to four inches tall, hill them slightly. This work is quickly, easily, and most thoroughly done with a double wheelhoe.

Go over the patch after every shower, hoeing and weeding and hilling. End of July or early in August the Colorado potato beetles are apt to appear. They are best fought by sprinkling Slug Shot over the vines while they are wet with dew or rain. Or the vines may be sprayed with Arsenate of Lead or a Paris Green solution, using a tablespoonful of the poison to a pail of water.

Above all, the potato patch must be kept free of weeds. Weeds are a heavy drain on soil fertility; so are potatoes. Both cannot thrive in the same patch without detriment to the cultivated crop. The watchword is weeding.



POTATOES FOR EARLY USE

IN CONNECTION with suggestions on this and the following page, bear in mind the remark made on page 165, that nearly every section has its own favorites which have made good crops for others. Inquire of your neighbors! Find out which sorts seem to be particularly well adapted to your local conditions.

On the general principle that thoroughbred sorts do well most anywhere, four extra early sorts will be found adapted to nearly all sections. These are *Early Ohio*, *Early Six Weeks*, *Early Rose*, and *Irish Cobbler*. Perhaps the earliest of these is *Early Ohio*, which, under favorable soil and weather conditions, has produced large tubers in seventy days after planting.

Early Ohio and *Early Rose* have a pinkish skin, while *Early Six Weeks* and *Irish Cobbler* are white. The latter forms round to square tubers while the other three sorts are of elongated shape. *Irish Cobbler*, as shown above, is perhaps the best keeping of the early kinds.



LATE POTATOES FOR WINTER USE

BESIDES being better keepers than early sorts, the late maturing kinds usually yield heavier crops, due generally to the greater size attained by the individual tuber. But this again depends largely on the soil, season, and the adaptability of different varieties to different sections.

Green Mountain is perhaps the most popular of all the late varieties in most sections. The individual tubers grow to good size, are generally borne six to eight to the hill, averaging a total of three to four pounds. The potatoes vary from flat round to elongated oval, have a white netted skin and are of excellent cooking qualities. (See a good "hill" above.)

Carman No. 3, *Rural New Yorker*, and *Vermont Gold Coin* are other excellent late sorts. *Carman No. 3* is a particular favorite because of the compact manner in which it grows its hills of tubers. The prize for quality in cooking mealy goes, perhaps, to *Vermont Gold Coin*.



POTATOES—HARVESTING AND STORING

THE early kinds mentioned on page 168 may be dug as soon as tubers reach any desired size. Care should be taken, when digging, not to bruise their skin since this will injure their keeping quality which, at best, is very limited. Late varieties intended for winter use should not be dug until vines have turned brown or black, are perfectly dry, and easily pulled off the hill.

Choose a dry, sunny day for digging, which may either be done with spade, fork or, on large areas, a plow may be brought into action. The tubers should be given an hour or two to dry before they are gathered.

A dry cellar with thorough drainage, where the temperature averages thirty-two to thirty-six degrees, is ideally adapted for keeping potatoes. They may be kept in bins, flat boxes, barrels, or crates, so long as the air is afforded a chance to circulate among them. On warm days the cellar should be aired. During extremely cold weather the bins or boxes should be protected by covering.



RADISHES

BECAUSE radishes are so easy to grow, they are found in nearly every home garden. And yet, it is very seldom that one finds them of top-notch quality, chiefly because the fundamental requirements of this democratic vegetable are misunderstood or disregarded.

True, radishes will grow most anywhere. Yet, to grow a quality product they must be grown quickly and must not be allowed to become overgrown. Attention should be paid to their growing far enough apart in the rows so that the roots do not crowd each other. The selection of proper sorts for different seasons is also of paramount importance.

On the Pacific Coast radishes can be enjoyed the year around. They can be sown any time that the soil can be put in good condition. It is almost hopeless to secure crisp, flavory roots during the dry season unless the gardener is prepared to irrigate the patch. The varieties suggested are the standards for all sections.



RADISHES—WHEN TO SOW AND HOW

THE best soil in which to grow radishes is sandy loam, well-enriched for previous crops. Fresh manure should never be used in the making of a radish bed since it is apt to infect the soil with maggots. Stiff clay soil may be improved by adding sand or ashes.

As soon as the soil can be dug and raked, seeds may be sown in rows, twelve to eighteen inches apart, scattering them so thinly that no more than two seeds drop to every inch. Radish seed is generally of strong vitality and every kernel will grow. Handled in this economical manner, the average seed packet will sow a row thirty feet long, while one ounce contains enough for 150 feet of row.

In light soil seeds may be covered one-quarter inch deep, less in heavy soil. Radishes quickly deteriorate in quality, and to have them just right, it is best to sow short rows often rather than to depend for a constant supply on sorts maturing in succession. But it is thoroughly practical to employ both methods.

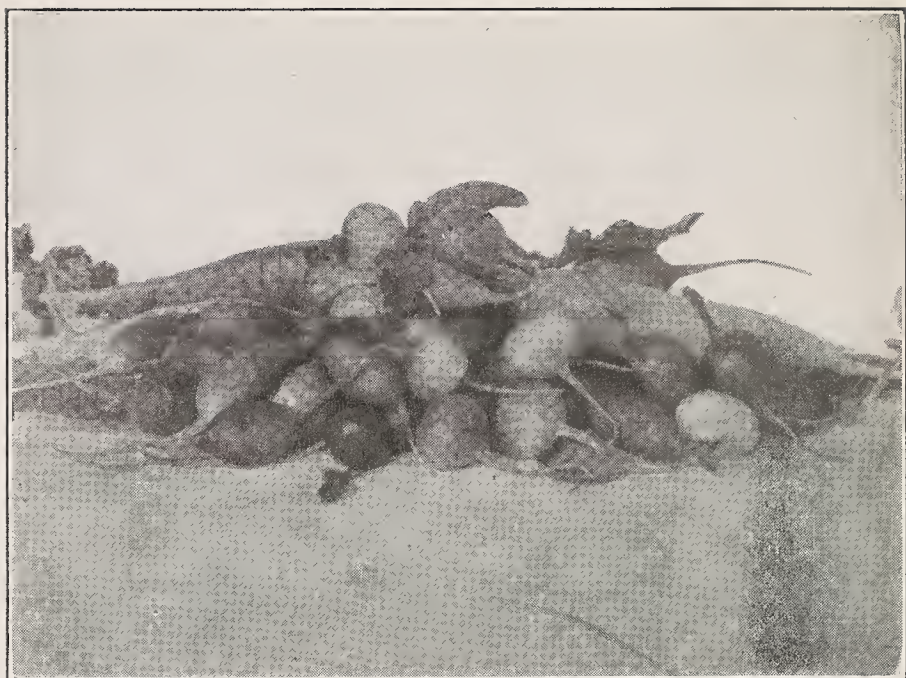


RADISHES—THINNING AND CULTIVATION

THE quality of the radish crop depends largely on the manner in which it is grown. Every time the radish seedlings are checked in their development, the crop is belated and a tendency is created in the roots to become pithy or tough.

As soon as the seedlings develop the second or third pair of leaves, they should be thinned out as shown above, so that the roots, when full-grown, will not touch each other in the row. For the small, extra early spring sorts, one inch apart is ample. The long sorts should stand two to three inches apart, while for the very large late fall and winter varieties, four to six inches of space in the row is not too much.

While thinning out, save the sturdiest, strongest seedlings whenever possible. They will form radishes most quickly. Weed the rows carefully; hoe them thoroughly. If the soil is light and the season is dry, do not loosen the soil too close to the roots or they stop growing.

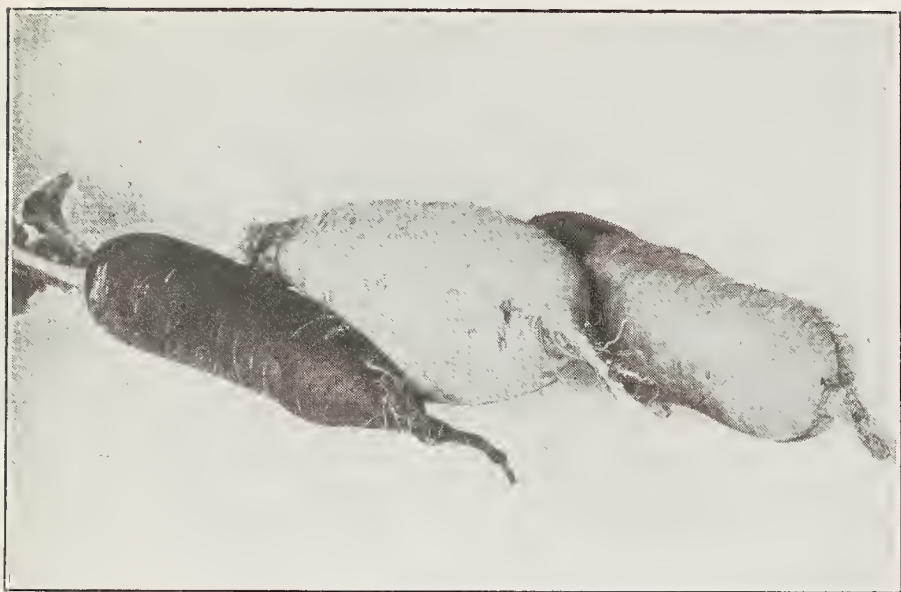


RADISHES FOR DIFFERENT SEASONS

NO OTHER vegetable, with the possible exception of lettuce, is as exacting as radishes in that specific sorts must be chosen for the different seasons if one would grow quality roots successfully. Spring sorts do not succeed during the summer months, summer and winter varieties do not thrive in the spring.

To have crisp radishes of mild flavor at all seasons, the home gardener must study types and varieties. As a rule, all the small flat, round, and olive-shaped kinds, whether white or red, are suitable for spring only and should not be sown after middle of May. From middle to end of May depend on *long*, white or red kinds which better endure the hot days that are apt to occur during June.

Throughout June, sow summer radishes, which will provide crisp roots during July and August, while during July the large, late maturing sorts should be sown for fall and winter use. The best kinds in each class are mentioned in the following chapters.



RADISHES—HOW TO ENJOY THEM THE YEAR AROUND

THOSE who are very fond of radishes will appreciate the following plan, which, if put to a test, will provide crisp roots from spring until spring.

Middle of April, sow fifteen-foot rows, of each *Rapid Red*, *Scarlet Turnip*, *White Tip*, *French Breakfast*, and *White Icicle*. Repeat this planting by May 1st, and follow with a row each of *Icicle*, *Long Scarlet*, *Short Top*, and *Lady Finger* by May 15th.

During the latter part of May, sow *Icicle*, *Chartier*, and *Lady Finger*, following this during June by repeated sowings of the last two as well as *White Delicious*. Throughout July sow *California Mammoth Winter* or *China Rose* and either *Round* or *Long Black Spanish* for fall and winter use. (See illustration of sorts, from left to right, *Long Black Spanish*, *California Mammoth*, and *China Rose*.)

All the extra early sorts lend themselves splendidly to intensive cultivation, since crops of them may be grown between the rows of later maturing vegetables like onions, tomatoes, beets, etc.

RADISHES

FOR thousands of years radishes have served for human food. Chinese books recording happenings of more than 3,000 years ago contain references to these crisp early spring delicacies. Radishes are, perhaps, the easiest vegetable to grow, and anybody having a few square yards of garden space can have them in abundance.

Radishes are one of the few vegetables which the home gardener may enjoy the greater part of the year. They grow in many shapes and sizes, and there are specific sorts for different seasons. They thrive in all soils and being a very hardy vegetable do well in nearly all climates.

Some kinds may be grown to eatable size in the almost incredible time of three weeks from seeds sown outdoors in early spring. By a correct selection of sorts suitable for different seasons you may pull radishes in your own garden throughout spring, summer, and fall. Read all about them on pages 171-175 and 192-196.



ROSY GEM RADISHES

Among the earliest, showiest, crispest

RHUBARB

WHO does not relish rhubarb, the delicious spring tonic, served stewed as sauce or in pies? For untold centuries prior to its introduction in Europe it was esteemed for its medicinal qualities among the natives of Mongolia and China, where it originally came from. To-day a few plants of it may be found in home gardens the world over.

The rhubarb plant is a hardy perennial. As such, it thrives for years, outdoors, without protection. It is generally started by setting out small plants or roots which are easily obtained from either nurseries or seed stores. But to those who have the patience to wait, the raising of rhubarb plants from seeds stands for both economy and an interesting experiment.

Rhubarb plants grow in any soil and the seeds are of strong germination. How to establish a rhubarb bed at small cost is described on page 278.



VICTORIA RHUBARB
None better in quality

SALSIFY, OR OYSTER PLANT

AS ONE of the most dependable and most easily grown winter vegetables, salsify deserves to be grown more generally than it now is. The natives of Mediterranean countries have known and esteemed salsify for centuries as a voluntary gift of nature, since it is found growing wild in Italy, Greece, etc. In most sections of America it grows like a weed, being not particular as to soil or climate.

While salsify is very hardy and thrives in a great variety of soils, it requires from 130 to 140 days to form full-grown roots from time seeds are sown. It, therefore, occupies the ground from the middle of May until the end of September. Unless you are very fond of it, and have ample space, it does not pay as well to grow salsify considering space, time, and labor, as many other vegetables. See page 197 for directions how to grow this interesting vegetable.



SANDWICH ISLAND SALSIFY

SPINACH

THE most popular of all vegetables for "greens." Since it is very hardy, it may be sown quite early in the spring or in the late summer for fall use. It deserves to be grown in every home garden since it vacates the space it occupies before warm-season vegetables such as beans and tomatoes are planted and it may be sown again when rows of early vegetables like radishes, peas, beans, etc., have borne their crop.

Spinach seed germinates strongly and quickly. It should be sown very thinly. The plants thrive in any soil, but only during cool weather. Experienced gardeners often mix spinach and carrot seeds and sow them at the same time in the same furrows. The strong spinach seedlings will "break" the soil for the more delicate carrot seedlings. Before the carrots begin to develop the spinach will be used. Other phases of spinach culture are described on page 226.



LONG SEASON OR TRIUMPH SPINACH

A fine sort for the home garden

SQUASH

TWO distinct types of squash claim the home gardener's attention—the dwarf or bush form and the very much larger and later “running” or vining varieties. The last named should be classed with the pumpkin; in fact, all squashes are really members of the “gourd” family and, as such, the strongly “vining” kinds occupy too much space to be deserving of a place in the average home garden.

The bush type of squash deserves more general cultivation. The small, flat “patty pan” sorts are good only while young. The larger and later “crookneck” squashes are useful during fall and early winter. The late, hard-shelled winter squashes keep a long time. All require rich soil, warm weather, and ample moisture to develop perfectly. For detailed information regarding squashes consult pages 249-252.



WHITE BUSH AND GOLDEN SUMMER
CROOKNECK SQUASHES

SWISS CHARD, OR SPINACH BEET

THE fact that "greens," as a food, aid a great deal to keep the human body in good order, has helped considerably to popularize these foliage beets. Swiss chard beets differ from the rest of the beet family in that they do not form beet roots. They make large, ornamental plants instead, which produce food all summer in the form of large leaves and thick, fleshy stalks. The leafy portion is cooked like spinach, the stalks are served like asparagus.

Sown early in the spring, in most any soil and anywhere in this country, swiss chard furnishes food within seventy-five days from date seeds are sown. How to sow, grow, and serve this splendid vegetable is told in detail on page 227.



LUCULLUS SWISS CHARD OR SPINACH BEET

TOMATO

THE tomato is a true American! It originated on this continent, probably in Peru. Its present state of perfection is due largely to the efforts of an American, Mr. A. W. Livingston, of tomato fame. Nowhere in the world has the tomato reached the standard of perfection as with us. Nearly every section of our country has developed special varieties that thrive better there than in any other place.

Next to potatoes, tomatoes (belonging to the same plant family botanically) are of greater importance to us as a food than any other vegetable, excepting corn. Because tomatoes are at home with us, they will thrive and yield handsome crops for any home gardener who cares to read the simple directions and suggestions offered on pages 122-127 and 144-150.



LIVINGSTON'S GLOBE TOMATOES

TURNIPS

THE best known root vegetable for winter storage. As such it has been known and grown in the most remote times, first reference to it being made by Greek writers more than 2,000 years ago. Turnips are members of the cabbage family and, as such, are cool season vegetables which thrive in most any soil.

You may gather young turnips within sixty days from date of sowing seeds. Again, you may have to wait nearly ninety days, as in the case of the later maturing Swedish turnips or rutabagas, but you will also be rewarded by their better keeping qualities. Grow more turnips. It is easily done and they are of very great food value. Their culture offers no difficulties, as fully explained on pages 198-203.



PURPLE TOP WHITE GLOBE TURNIP



RADISHES—THE EARLY ROUND AND TURNIP SHAPED SORTS

THIS class is made up largely of what is popularly known as the “cherrystone” kinds. Several of them develop small but symmetrical roots fit for use in eighteen days to three weeks. They are excellently adapted for growing under glass or in small gardens.

Among the pure-white sorts, *Hailstone* is the earliest, perfecting flat, turnip-shaped roots, one-half to three-quarter inch in diameter, within eighteen to twenty days. *Snowball* (root at bottom of illustration) produces slightly elongated, globe-shaped roots a few days later.

Foremost among the red kinds ranks *Rapid Red* (see uppermost root) an extra early, short-leaved sort, producing half-inch globular roots with but three pairs of leaves in eighteen to twenty days. *Vicks Scarlet Globe* is the most popular in this class. *Scarlet Turnip White Tip* (second radish from top) is ready about the same time.



RADISHES—THE OLIVE-SHAPED SORTS

JUST as among the round ones, we find among olive-shaped radishes sorts with pure white skin, clear red ones, and red sorts with white tips. Their quality does not differ from those described on preceding page, but all reach table size slightly later and will grow to be larger without becoming pithy.

White Olive-Shaped forms handsome roots with crystal white, transparent skin, in twenty-two to twenty-five days from date seeds are sown. They are at their best when about three-quarters inch in diameter by one and a quarter inches long. The same holds good with all olive-shaped sorts, among which *French Breakfast* is the most popular scarlet white tipped. Under favorable conditions it is ready in twenty days after seeds were sown. *Scarlet Olive-Shaped* (as shown above) may be termed the mate to *Vicks Scarlet Globe* among the early round sorts. It is ready in about thirty days and stays in "fit" condition longer than either of the others mentioned above.



RADISHES—EARLY LONG KINDS

THE long sorts are particularly useful in that they become fit for use just about the time when the quality of sorts described previously begins to decline. Again, we have a choice of pure white, pure red, and red-tipped white kinds. The leading pure white sort of this class—*White Icicle*—may be considered the greatest all-around general purpose radish in cultivation. (See illustration to right.) The home gardener who wants to confine himself to one sort only makes no mistake in choosing it for his stand-by. The pure-white, crisp roots are ready for use in about thirty-five days.

Early Long Scarlet Short Top (shown to right) is a clear red sort, ready within thirty days where soil and season are favorable. *Cincinnati Market* is a slightly later red sort, growing a little larger, with flesh of firmer texture. *Long Brightest Scarlet* or *Cardinal* is the white-tipped companion to *Long Scarlet Short Top*. It is an exceedingly handsome sort but quickly becomes pithy.



RADISHES—SORTS THAT STAND SUMMER HEAT

AFTER June 1st, it is useless to sow seeds of early radishes, with the possible exception of *White Icicle*. But even that dependable early standard does not remain fit to eat longer than a few days, hence the home gardener will do well to arrange for a few rows of any or all of the following sorts. All grow much larger than the early sorts, have flesh of firmer texture, stand heat better, but require a longer time to become ready.

Chartier or *Shepherd* is a long, rose-colored sort with attractive white tip. It is ready for use about thirty days after sowing. This is the standard summer sort in the West. *Long White Vienna*, or *Lady Finger*, in general appearance very much resembles *White Icicle*. But the roots are slimmer and not ready until ten days later.

White Stuttgart (to left) and *White Strasburg* (to right) are two still later sorts of larger size and shape as illustrated. Roots reach good size in sixty days.



RADISHES—THE LONG KEEPING WINTER SORTS

AS A late crop, these work ideally in the scheme of intensive cultivation. They should not be sown much before middle of July or just about the time when rows of early lettuce, peas, spinach, etc., become exhausted. Keep in mind not to sow them after other root crops.

Varieties of winter radishes are divided into two broad groups, according to their source of origin. We have the Asiatic varieties, of which *China Rose*, *White Chinese* (shown above), and *California Mammoth* are the leading three. The other group is made up of the European type represented by *Round*, *Half Long*, and *Long Black Spanish*.

The *Spanish* radishes are the latest but also the firmest in flesh and texture and consequently keep best. They are generally stored for winter use, although ready in about eighty days from date of sowing. The *Chinese* sorts are about a week earlier, are of distinctly milder flavor, and grow very much larger, but do not keep as well. *California Mammoth* and *Black Spanish* are very popular.



SALSIFY, OR OYSTER PLANT

SOW the long, slim, woody-looking seeds as soon as the ground can be worked, in rows, eighteen inches to two feet apart. Drop about two seeds to every inch, and cover them a half to three-quarters of an inch deep. The average packet, handled in this manner, will sow twenty feet of row, one ounce for one hundred feet.

The seedlings, which look like strong sprouts of grass, will appear in about ten days. As soon as they become four inches tall they should be thinned out to stand four inches apart in the row. Being a deep rooting vegetable salsify should be hoed frequently and to good depth.

Because salsify requires all season to grow to good size, repeated sowings are not practical. Sow not later than June 1st. Roots from later sowings develop more rapidly than those from earlier ones, but do not keep so well.

Mammoth Sandwich Island as shown herewith is the stand-by in all sections. It is dug in the fall and stored like carrots, or left outdoors and protected like parsnips.



TURNIPS

AS ONE of the few vegetables that may be had the year around, turnips have always stood high in popular favor. Their growing offers no particular problems and they do well in all soils and sections, though they thrive best in a rich, sandy loam during the cooler months.

On the Pacific Coast, however, the use of turnips, kohlrabi, and allied members of the cabbage family is distinctly limited to those seasons of the year when they may be gathered in highly succulent condition and used quickly. They are generally sown very early in the fall and throughout the winter so as to become fit for use very early in the spring. They do not thrive during summer heat and become subject to disease during prolonged drouths.

In common with radishes, to which they are closely related, turnips offer a wide choice in sorts of different shape, color, and season of maturity. They are particularly valuable as a late season crop, by means of which the usefulness of the garden is extended up to frost.



TURNIPS—WHEN TO SOW AND HOW

BY SOWING seeds of extra early kinds (see p. 169) as soon as the ground can be put in shape in early spring, tender turnips may be gathered within sixty days after sowing. However, these early kinds do not keep well and hot weather, during July and August, is apt to produce bitter roots. For this reason the planting of turnips is generally abandoned by middle of May, to be resumed during July to produce roots for fall and winter.

Seeds are of strongest germination and should be sown very thinly, on an average not more than two to an inch, which will cause the average packet to suffice for thirty feet of row, one ounce for 200 feet of row. The rows should be placed twelve to twenty-four inches apart, according to variety. The early sorts make but small tops and can be planted closer than later, larger sorts with more spreading tops. Seeds should be covered from one-quarter to one-half inch deep, according to soil.



TURNIPS—HOW TO CULTIVATE, AND FIGHT INSECTS

AS SOON as the young seedlings are two to three inches tall, thin them out. The small, early kinds may be left to grow three inches apart in the row, while six inches is about right for the very large, late rutabagas. After the young plants outgrow the baby stage, they become healthy, rugged weeds and require little attention except that they should be hoed about once a week.

Turnips have two insect enemies which are easily combated. While the plants are small they are apt to be attacked by the small black flea beetle which riddles the leaves with fine holes and causes the plants to die. Slug Shot or tobacco dust, sprinkled over the tops, while wet with rain or dew, will quickly drive away the beetles.

The other and more serious pests are root maggots infesting the soil. Where they appear in any appreciable number it is best to shift the turnip rows to another part of the garden.



TURNIPS—THE EARLIEST KIND

DEPENDING on their character of growth, season of maturing, and keeping qualities, turnips may be divided into three classes, early sorts, winter varieties, and rutabagas. The earliest sorts may be treated very much like early radishes and should be used promptly.

Early White Milan and *Early Purple Top Milan*, as shown above, form decidedly flat bulbs which are best to eat while averaging two to three inches in diameter. They reach that size within sixty days after seeds are sown. *Early Snowball* is a perfectly round, smooth sort of similar season of maturity, but a slightly better keeper.

These early turnips may be sown from early in April up to middle of May and again during July and up to middle of August where serious frosts do not occur until middle of October. The average light frost does not injure turnips. While the roots grown during fall will be of firmer texture than roots of the same kinds grown during the spring, none of the above three sorts keeps well.



TURNIPS—FOR WINTER USE

THE main sowing of these is generally made during the first week in July and they are grown and cultivated very much like winter radishes. Plants are thinned out to stand four inches apart in the row which are generally put two feet apart.

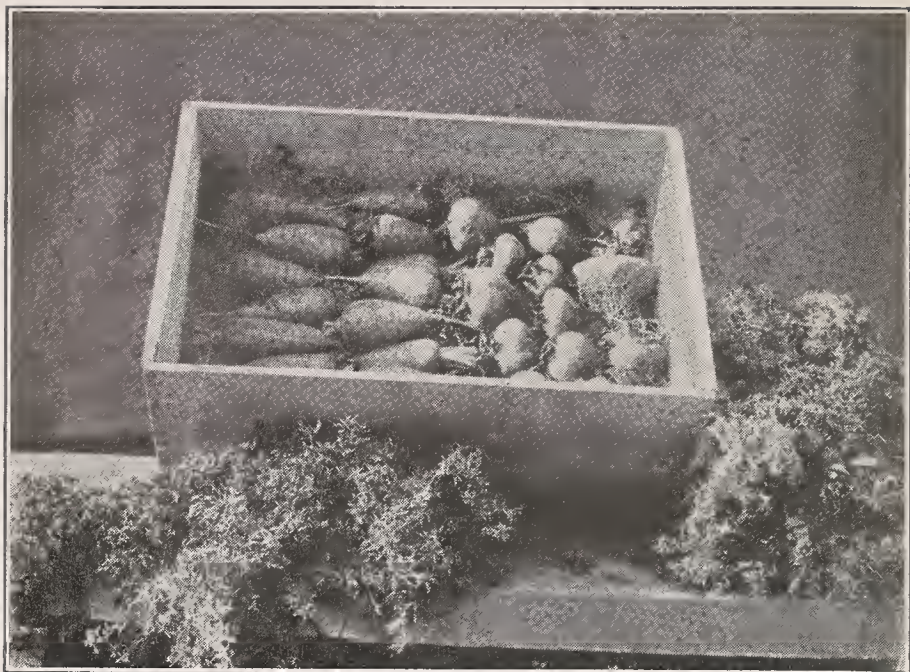
Perhaps the most widely grown sort in cultivation is *Red or Purple Top White Globe* which forms handsome, globe-shaped roots in seventy-five to eighty days from date of sowing seeds. Properly grown roots average three to three and a half inches in diameter and have pure-white skin with red and purplish blotches around the top. *White Egg* is of elongated shape and slightly earlier, but does not keep so well. *Pomeranian White Globe* grows slightly larger, but has coarser flesh and is later. *Long White Cowhorn* is a still later sort grown extensively for cattle feed. The flesh of all these is white. The most popular yellow-skinned and yellow-fleshed sorts are *Golden Ball* and *Yellow Aberdeen*.



RUTABAGAS, OR SWEDISH WINTER TURNIPS

RUTABAGAS differ from the common turnips in having more of a cabbage-like foliage and the roots grow to very much larger size, besides being by far the best keepers. Large quantities of the coarser kinds are used for cattle feed. The medium-sized sorts, of which *American Purple Top* or *Improved Long Island* (as illustrated) is the leading kind, are of very fine table quality. *Purple Top* grows partly out of ground, being of bright yellow color beneath the soil. It is of elongated globe shape. Flesh yellow.

Sweet German and *White Swede* are two white-skinned, white-fleshed sorts of slightly later season of maturity and elegant table qualities. *Yellow Aberdeen* and *Monarch* are two late sorts with yellow flesh of very good quality, though grown principally for stock feeding purposes. All the above sorts grow partly above the ground, which makes their harvesting easy. All will keep well until spring if stored as suggested on next page.



THE STORING OF ROOT CROPS

WITH the approach of cold weather all the roots described in preceding pages should be pulled or dug and stored in frost-proof cellars or easily accessible pits. The exception to the rule are parsnips and salsify which are not injured by freezing, but rather improved in quality. Both these vegetables may be left in the ground where they grew and covered with straw or boards, or both, so as to make possible their digging throughout the winter.

Beets, carrots, etc., should be dug. Remove all superfluous soil, rootlets, etc., and cut off tops to within an inch of the crown. Have some shallow boxes or crates handy into which to place the roots, in layer fashion, putting dry soil or sand or moss between the layers. Do not store roots that are bruised in digging or injured by chewing insects, since they will not keep and are apt to cause adjoining sound roots to rot. The crates or boxes should be placed in a dry, cool cellar, but away from furnace.



SALAD PLANTS

OF THOSE plants of which we eat the prepared green leaves in the raw stage we generally think as salad plants. As a class, few are easier to grow. Yet good salads are met with all too rarely on the home table, because most people depend on the market supply.

Since freshness and crispness of the plants are the prime requisites of good salads, the best way to get them is to grow them yourself. Fortunately, a good supply may be grown in comparatively small space. Since nearly all salad plants described in the following pages are partial to shade, they may be grown quite successfully in the average city garden where the sun shines but little.

None of the salad plants are particular as to soil. But as their quality depends on how quickly they may be grown large enough for use, the spot in which they are grown should be well enriched with plenty of rotted manure. Frequent and thorough cultivation will, to a certain extent, offset lack of fertility.



WITLOOF CHICORY OR BRUSSELS WITLOOF

ANY time after the soil has become thoroughly warm in the spring sow seeds thinly in rows, two feet apart, and cover them about a quarter inch deep. Within two weeks the seedlings will appear, and a few weeks after that they should be thinned out to stand, first four inches, later eight inches apart in the row.

Throughout the summer encourage these plants to make a strong growth by giving them frequent and clean cultivation. The first frosts will generally cause the leaves to drop and die, when the roots may be dug. They somewhat resemble a parsnip. Place them in a shed or cool cellar and let them rest for a few weeks, protecting them against frosts.

Prepare a box, fourteen to eighteen inches deep, by putting about two to three inches of soil in bottom. Trim roots to be six to eight inches long and cut off all remaining foliage to within one inch of neck. (See illustration.) Place roots upright, side by side, in box, allowing about one inch space between them. Fill box and cover crowns with four or five inches of sand or soil. In a few weeks nicely blanched bunches of leaves will appear.



CORN SALAD, OR LAMB'S LETTUCE

A DISTINCT cool weather crop that does well only in sections enjoying a cool climate. It can be grown in all parts of this country during fall, winter, and early spring. Seeds are generally sown in the fall, in either small beds or short rows, eight to twelve inches apart. Close planting is advisable because, with the approach of severe cold, the plants should be covered several inches deep with loose straw, hay, or strawy manure.

The general directions given for growing spinach apply to corn salad as well. The slim, elongated leaves should be gathered when four to six inches long. Alone, they are quite tasteless and favored only by people who eat salads for the sake of the dressing. But served in connection with other salad plants, corn salad is very palatable.

The first crop is generally ready for gathering sixty days after seeds are sown. For a constant supply make repeated sowings from earliest spring until May 1st and again from middle of August until frost.



CRESSES

THE *Curled Garden Cress* or *Pepper Grass* is one of the most appetizing of all spring salads and it literally grows "as quickly as grass," making a very rapid growth in any garden soil. That, as a matter of fact, is the *only* fault of *Curled Cress*: it grows so rapidly that the home gardener seldom ever has a chance to use it all before it goes to seed.

Sow very thinly in rows, a foot apart, cover lightly and use as fast as it becomes six inches tall. Make repeated sowings of ten-foot rows throughout April.

Water Cress forms much fleshier stems and leaves, but requires very moist soil to do well. It generally is grown along the banks of small creeks where, being hardy, it thrives year after year after becoming established. Seeds are best started in pots or pans early in April and seedlings transplanted in May. Small quantities may be grown in boxes, pans, or bowls, in a sunny window, in the house.



ENDIVE

OF DISTINCT usefulness only during early spring and fall, since even moderately warm weather will quickly cause the plants to produce seed stalks. Endive is of a decidedly bitter flavor, no matter how well grown, and few people relish it as a dish by itself. Used in connection with milder salads, it adds flavor.

Seeds may be sown in any good garden soil, in rows eighteen inches to two feet apart, covered just enough to hold them in the furrows. Within ten days young seedlings will appear which somewhat resemble lettuce with a "crinkly" edge. When four inches tall they should be thinned out to stand from six inches to a foot apart.

First sowing should be made as soon as the ground can be prepared. By transplanting seedlings that are thinned out, endive may be had until early in July. For a fall supply sow during July or August and cultivate just like lettuce. The average packet contains enough seeds to sow thirty feet of row.



ENDIVE—HOW TO BLANCH IT AND THE BEST KINDS TO GROW

THE best quality is not developed in endive until the fully grown plant has been blanched. This is easily done while it is still growing in the garden row. Gather all the leaves until the plant resembles an upright cone-shaped bunch of foliage. Around this tie soft twine or raffia, holding the plant in a compact, upright position. (See illustration.) The centre will soon bleach to a most appetizing creamy-white color and the bleaching process will also improve the flavor. After a rain the strings should be untied, to permit drying, or the leaves will rot.

Large Green Curled is the kind most widely known and grown. *White Moss Curled* will naturally blanch in the centre, but it also is improved by tying. *Giant Pancalier* is a new French sort with particularly fine cut and curled leaves. *Broad Leaved Batavian* grows different from all the rest, having broad, fleshy leaves. It is largely used for soups and stews. Ready for use in about sixty days.



LETTUCE

NEXT to radishes, lettuce is the most popular crop in the home garden. Yet comparatively few people know how to get the best out of this easily grown salad simply because they completely disregard character of the plant and its natural requirements.

Cool weather and plenty of moisture are the two most important factors in lettuce culture. Given these, the plants thrive in a remarkably great variety of soils. On poor soil frequent cultivation will often overcome a lack of fertility. By planting sorts adapted to different seasons, crisp salads may be enjoyed all summer.

The lettuce plant is naturally of a spreading habit of growth and resents being crowded in the row. Nearly all failures to obtain heads from head lettuces are due to a disregard of timely thinning. There are four distinct types of lettuces, namely, the loose-leaf sorts that do not form heads, the butterhead sorts, the crisp-head varieties, and the *Cos* or *Romaine* lettuces.



LETTUCE—WHEN AND HOW TO SOW

ANY soil will grow lettuce, though a deep, friable loam well enriched with manure and full of humus will most quickly produce the choicest heads. A heavy soil should be made lighter by adding some sand or ashes. Soils of a light, sandy nature need large quantities of manure.

Start with any soil available, about middle of April or as much sooner as garden can be made. The young lettuce plants are very hardy and belated frosts do not injure them. Sow seeds in rows, two feet apart, covering one-quarter to one-half inch deep, depending on soil. Sow very thinly, dropping about two or three seeds to every inch. The average packet will sow fifty feet of row.

A constant supply may be obtained by sowing sorts maturing in succession or by sowing short rows of the same kind at regular intervals. But when adopting the latter course, keep in mind that there are different sorts for different seasons. Sorts that do nicely during the cool spring months will not form heads during the summer.



LETTUCE—THINNING AND TRANSPLANTING

THE one phase of growing lettuce that must be considered of greater importance than any other is the need of prompt and repeated thinning out of the young plants. Within three weeks after seeds are sown the seedlings will be two to three inches tall when they should be thinned out to stand about two inches apart. The gardener who lets lettuce grow in a crowded row and pulls the leaves for salad when about four inches long will never know what quality in lettuce means. A week after the initial thinning, every other plant should be removed, thus giving each plant four inches in the row. The pulled up plants may be transplanted.

This work of thinning should be continued so that at no time do the plants touch, let alone crowd each other. A final distance for the plants of a foot apart in the row will be found about right for the majority of the head lettuces, though exceptionally large-growing sorts may be given eighteen inches.

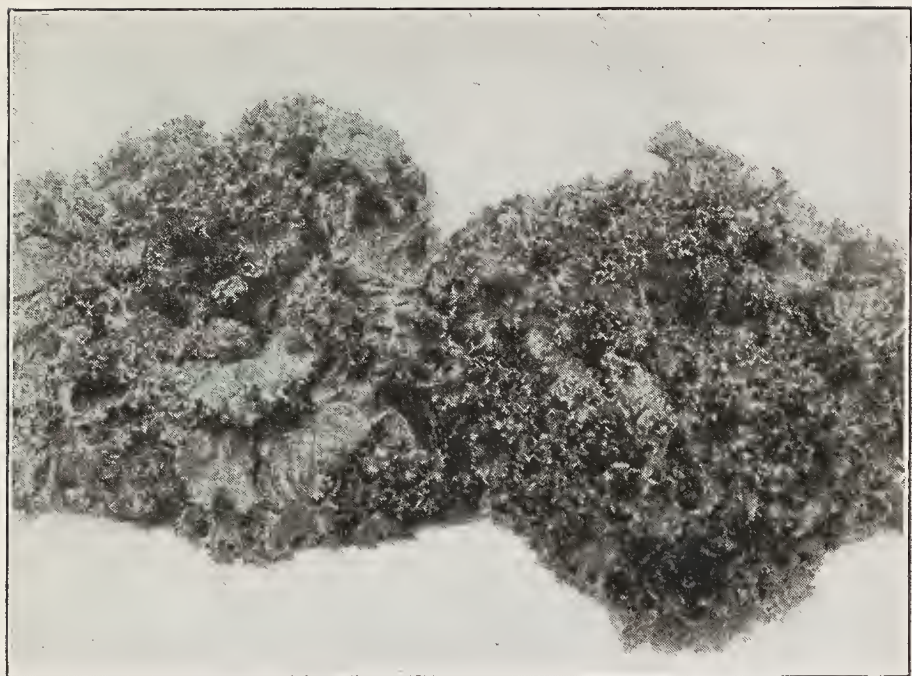


LETTUCE—PROVIDING A CONSTANT SUPPLY

THE first lettuces to yield salads are the early loose-leaf and early butterhead sorts described in the next two pages. These stand the cold, damp weather of very early spring to perfection, but do not thrive well later in the season, when the weather gets hot. For this reason, only a limited number of rows should be sown.

The late butterhead and crisp-head sorts will do well from spring-sown seeds, up to end of July or early August. The *Cos* or *Romaine* lettuces resist heat best of all, but even they are apt to turn bitter during hot, dry spells. Here is a schedule that will provide lettuce all summer.

On March 15th start plants of the early looseleaf or early butterhead sorts by sowing seeds in boxes in the house or hotbed, plants to be set into the garden by middle of April. Sow, at the first opportunity, outdoors, a fifteen-foot row each of *Black Seeded Tennisball* (illustrated above), *Black Seeded Big Boston*, and *California Cream Butter*. On May 1st follow with *All Seasons*, *Iceberg*, and *New York* lettuces and repeat this planting by July 1st.



LETTUCE—THE LOOSE-HEADED OR EARLY CURLY-LEAVED SORTS

THESE will not form heads, but make large plants of attractively curled and crinkled leaves. While their quality does not compare with that of the butter-head lettuces, their curly leaves are most acceptable.

The loose-leaved lettuces will do better under more widely varying conditions of soil and climate than any other class. This is the reason, perhaps, why *Prizehead* is the most popular lettuce in the country to-day, though of indifferent quality. It will not develop heads.

Black Seeded Simpson forms handsome plants, a foot in diameter, within fifty days after seeds are sown. In a rich, moist, warm soil, which favors rapid development, it is far superior in quality to *Prizehead*.

Grand Rapids (illustrated) is the standard loose-leaf sort for under-glass growing in all parts of the country. Grown outdoors, it is a few days earlier than *Black Seeded Simpson*, forms more upright plants, and is more curly.



THE EARLY "BUTTERHEAD" LETTUCES

THEIR advent to the table marks the beginning of real quality salads. They have the rich "fatty" and smooth "buttery" feel and flavor that gives them their name. Within fifty-five days from date seeds are sown *Wayahead* forms compact, light green heads averaging ten inches in diameter, with a tightly folded golden yellow heart fit for any epicure. This is, perhaps, the best sort of the *White Seeded Tennisball* type and a great rival of *May King* in popular favor.

Nanmburger or *Tenderheart* (illustrated) is of the *Speckled Dutch Butter* type, with prominent dark brown spots on outer leaves. It is about six days later than *Wayahead*, but grows larger and remains in good condition several days longer. *Nanmburger* does well also sown late in July or early August, for late fall crops.

Black Seeded Tennis Ball and *Black Seeded Big Boston* are both excellent for spring and early summer, with the heat-resisting qualities in favor of *B. S. Big Boston*. However, to offset this, *B. S. Tennisball* is of milder flavor. Both kinds are of top-notch quality in from sixty to sixty-five days after planting.



LETTUCE—LATE BUTTERHEADS THAT RESIST MIDSUMMER HEAT

THE connecting link between the early butterheads and those on which planters may depend to form heads as late as the season will permit is *California Cream Butter*. This is one of the most dependable of all lettuces, always forming handsome, solid heads of exceptional quality in sixty-five to seventy days from date of planting. From seeds sown end of April it will furnish delicious salad until middle of July, when *All Seasons*, as shown above, will be in its prime. Many call this the *Black Seeded Deacon* and it is surely superior to old *Deacon* in heat-resisting qualities. *All Seasons* differs from all other sorts suggested so far by being of a distinctly uniform shade of deep green. Ready in seventy-five days.

Speckled Dutch Butter is valuable because it matures more slowly. Thus, when nearly all the heads in a row of *All Seasons* are ready, only a few of *Speckled Dutch Butter* sown at the same time will have reached full size. The latest of this group is *Brown Dutch*, a dark green sort, heavily shaded with dark brown tints which denotes both heat and frost resistance. A week later than *All Seasons*.



THE "CRISP-HEAD" LETTUCES

THESE differ from others described so far in that their leaves are very heavy and rather coarse. Each leaf has a heavy midrib which is strongly curved toward the centre and is responsible for the tightly folded character of the "crisp-head" lettuces. So tightly are they folded that frequently the inner leaves will rot and the seed stalks often penetrate the sides of the heads.

Iceberg is the earliest. It perfects slim, conical-shaped heads of yellowish green color, with the centre leaves tinged red and curled along the edges. *Iceberg* is ready in sixty days and remains fit for two weeks.

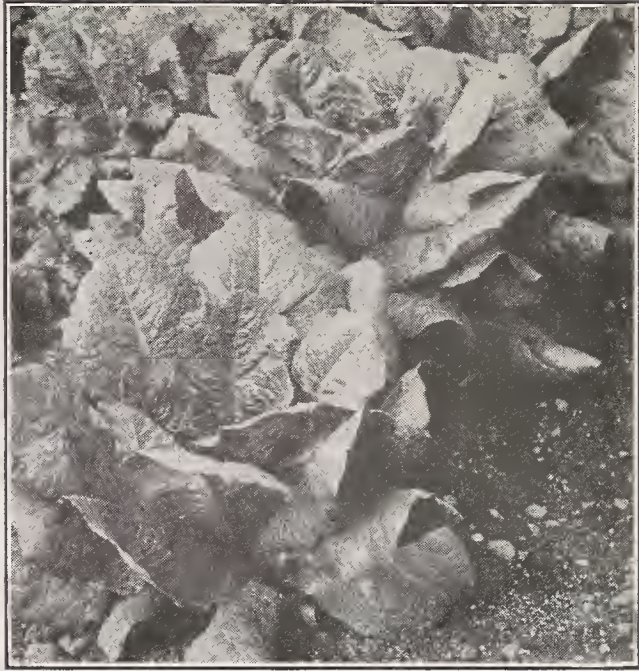
Improved Hanson is a few days later and of a distinct "silvery" shade of light green. *New York* or *Wonderful* (see illustration) is a large, deep green, very coarse sort maturing in sixty-five to seventy days. *Crisp-as-Ice* is a smaller sort of deep green color shaded with bronze and brown. It is particularly valuable for late fall because of its frost resistance.



LETTUCE ON THE PACIFIC COAST

THIS is one of the most eminently satisfactory garden crops on the Pacific Coast, which is responsible for the Golden State being the largest producer of lettuce seed in the world. Where heat and moisture are moderate lettuce may be enjoyed the year around right out of the garden. Seeds may be sown from earliest spring, throughout summer and winter. Where the rainfalls are heavy, it is customary to sow the seeds on a raised bed in a well-drained situation. From this bed plants are transplanted whenever space becomes available in any part of the garden.

In most gardens in the interior valleys and bottoms, lettuce is sown in rows, thinned out, and transplanted as described on pages 212-213. During the hot summer months, it appreciates frequent irrigation. If some shade can be provided by means of lath screens or by planting the rows along the shady side of tall-growing vegetables, the heads will stand longer before bursting.



COS, OR ROMAINE LETTUCE

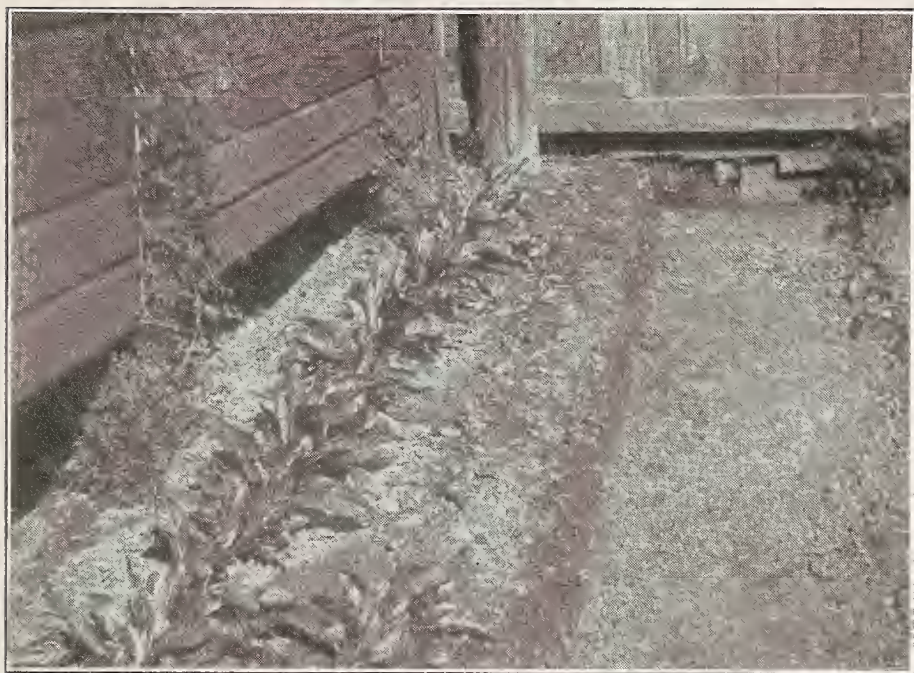
TWO characteristics make this type deserving of a place in every garden: its great heat resistance and the crisp quality of the flat, elongated leaves. Moreover, cos lettuce is much easier to grow than the more exacting head lettuces. When properly bleached it compares very favorably with the butterheads.

Cos lettuce may be divided into two classes, being partly of self-folding and partly of spreading habit of growth.

Eclipse or *Express Cos* is the best example of the self-folding type, forming symmetrical and erect heads which, because of their compact growth, blanch nicely in centre. It is ready in sixty days.

Paris White Cos is of the spreading type. When of good size, outer leaves of plant should be gathered up and tied loosely to blanch centre.

Magnum Bonum, as shown here, is the largest, but also latest, developing in about seventy-five days. On good soil plants frequently weigh two pounds.



VEGETABLES FOR GREENS AND FLAVORING

THE majority of the following vegetables are eaten cooked and, in such condition, the broad public generally forgets their original name and calls them "greens." Thus we find, in connection with kale, mustard, spinach, and Swiss chard that all may be "greens" or all may be "spinach" on the bill-of-fare.

The exception to this are okra and parsley. The former is used largely to give substance to soups. Parsley is the leading vegetable for garnishing.

Dandelion is one of the greatest spring tonics. The broad-leaved, cultivated form is far superior to the wild growing product. While it is sometimes grown and blanched like endive for salad purposes, it is generally cooked as greens. Seeds are sown thinly, in rows eighteen inches apart and covered just enough to prevent wind blowing them away. Seedlings should be thinned out to stand four inches apart. Plants will develop like the true weed which dandelion is.



KALE OR BORECALE

A MEMBER of the cabbage family varying in character of plant in that the individual leaves are carried on stems that grow away from main stalk instead of leaning toward same, as in the case of cabbage.

Seeds are sown very early in the spring, just like extra early radishes. Plants should stand eight to twelve inches apart in the row. Those that are thinned out may be transplanted to other rows. The main sowing is made in June for a fall crop when kale is at its best. Frost improves the quality.

Dwarf Green German (as shown above) and *Dwarf Brown* are both of dwarf habit of growth, plants spreading two feet or more and growing about eighteen to twenty inches tall. Ready in seventy-five to ninety days.

Tall Green Curled Scotch is of straight, upright growth, reaching a height of two feet or more on good soil. The leaves are gracefully disposed around centre stem. Ready in ninety to one hundred days after sowing.



MUSTARD

THE broad-leaved sorts of recent introduction have helped greatly to popularize mustard as both a salad and as "greens." As a salad, it is used sparingly, mostly to give added piquancy to "flat" salads.

For greens, the seeds are sown thinly, in rows, twelve to eighteen inches apart and covered one-quarter inch deep. Seedlings are thinned out to stand four inches and later eight inches apart. Plants must be used before flower buds appear which cause the leaves to become of strong flavor. Sow short rows repeatedly up to May.

Elephant Ear grows light green leaves with white ribs. In rich soil, each plant of this sort should be given at least twelve inches in the row since leaves will grow eighteen inches to two feet in length.

Fordhook Fancy is a beautiful curly-leaved sort of dark green color. Cooked like spinach, is of fine flavor.

Southern Giant Curled, shown above, is the most widely grown sort in all sections.



OKRA

A SOUTHERN vegetable, as yet little appreciated in the North. It will grow wherever corn grows and it is distinctly useful in the making of stews, as a flavoring, and to give consistency to soups.

The seeds should be sown about end of May. They are dropped four inches apart in the row, covered two to three inches deep, and two to three feet of space should be allowed between the rows.

When the young plants are four to six inches tall, they should be thinned out to stand twelve to eighteen inches apart in the row. Hoe and cultivate just like corn. The pods, which form at the leaf joints, are the useful part of the plants.

White Velvet, as shown above, forms handsome, slightly curved, smooth, white pods sixty days after sowing. Use while three to four inches long, since later they become woody. *Kleckley's Favorite* and *Perkin's Mammoth* are two other popular kinds.



PARSLEY

SOW the seeds as early in the spring as the ground can be prepared, in a row, dropping them to space thinly. Cover from one-eighth to one-quarter inch deep, according to soil, and allow eighteen inches to two feet between the rows. Parsley seed is very slow to germinate and often a month will elapse before seedlings appear.

Thin out the plants, when large enough, to stand six inches to a foot apart. Since a dozen plants of parsley will provide an ample supply for the average household, it is well to give each individual plant ample space.

In the fall the row may be protected with boxes, boards, or straw and the parsley will keep growing until severe, cold weather. A few of the roots may be dug, trimmed slightly, top cut back, and planted in a six-inch pot. They will grow all winter in a sunny kitchen window. *Champion Moss Curled*, *Double Curled*, *Dwarf Perfection*, and *Plain* or *Single* are all well-known kinds.



SPINACH

THE best known plant for "greens" in all sections. It thrives most anywhere, in all soils, but only during the cool seasons of the year. During July and August the plants form flower stalks before fully developed.

Sow the seeds in furrows, one-quarter inch deep, with eight to twelve inches between the rows. Timely thinning of plants to stand four to six inches apart helps in growing a quality product, also helps in keeping the plants from "going to seed" prematurely. In good soil, spinach grows large enough for use in four to six weeks. At least fifty feet of row is required to provide several meals. An ounce of seeds will sow 150 feet.

Improved Thick-Leaved, Norfolk Savoy Leaved, All Seasons (shown above), *Prickly* or *Winter* and *Victoria* are standard sorts, in great favor in different sections. *New Zealand Spinach* is of an entirely different type. It makes large, spreading plants from which tender, green tips may be gathered all summer.



SWISS CHARD, OR SPINACH BEET

SOW as early in the spring as garden can be made, in rows two feet apart. Drop three to four kernels to every inch and cover one-quarter inch deep. After covering, walk over the rows, as suggested under "beets" and illustrated on page 152.

When about four inches tall thin them out to stand two inches apart. A week later remove every other one. By then they are usually large enough to be cooked as "greens." Repeat this "thinning out" process until the plants stand a foot apart in the row. A packet of seeds will sow a twenty-foot row of Swiss Chard which will provide all the greens an average family uses.

Repeated sowings are unnecessary, since the row bears until frost. *Lucullus Swiss Chard* (as shown) is by far the best quality kind for the home garden.



MOST POPULAR POT HERBS

WHILE these can hardly be classed as vegetables, yet a few plants of each of the most popular culinary herbs deserve a place in every well-managed kitchen garden. While at present their usefulness is appreciated only in the making of soups, stews, or for flavoring dressing, the future will see them attain greater prominence, especially in connection with canning and preserving.

Sage, as illustrated above, is, perhaps, the most generally grown of all herbs. The leaves are used to flavor dressing.

Mint, *Thyme*, and *Sweet Marjoram* are useful in the making of sauces, to be served with fish, fowl, or meats.

Borage and *Dill* are largely used in preserving of cucumbers. *Caraway* is grown for the seeds with which bread and pastry are flavored.

Since seeds of nearly all of above are of rather slow germination and the seedlings are very delicate, it is best to start them in the house, in a seed flat, as described and illustrated on page 22.



VEGETABLES THAT BEAR FRUITS ON VINES

THE term "vines," as used here, refers specifically to that class of plants the fleshy branches and leaves of which spread rampantly all over the garden. Cucumbers, melons, pumpkins, and squashes are of doubtful usefulness in the average home garden, since the value of their crop per square foot is very much below that of other vegetables. However, cucumbers and muskmelons are easily confined to small space, whereas watermelons, pumpkins, and squashes are rather field crops.

All the vegetables in this group are rank feeders and the ground can hardly be made too rich to suit the plants. As a rule, they are planted in "hills," which should be prepared as follows: Dig holes, ten to twelve inches deep and as wide across and fill with compost or thoroughly rotted manure. Tramp down tightly and soak with water until thoroughly wet. On top of this build a hill of fine soil as wide as the hole in diameter and the top about four inches above ground level.



CUCUMBERS—HOW TO SOW AND WHEN

CUCUMBERS are warmth-loving plants. While hills, as described on preceding page, may be prepared any time, three feet apart each way, seeds should not be sown until soil and weather have become quite warm, toward end of May. Then make a furrow, one-half inch deep, running it in circular form, about four inches in diameter, around top of hill and scatter about a dozen seeds in it.

Cover and press soil down firmly with your hands. The seedlings will appear within a week and almost simultaneously a little beetle with yellow-striped wings is apt to visit the patch. Fight him at once by dusting the hills with Slug Shot, or flour mixed with Paris Green. Aside from this, cucumbers have no insect enemies.

When the plants start to form the third pair of leaves and the danger from bugs is over (they only attack the seedlings) reduce the plants to two to four of the strongest per hill. The richer the soil, the more may grow.



CUCUMBERS—CULTIVATION AND PROVIDING A CONSTANT SUPPLY

FOR earliest crops, seeds may be sown in the house about middle of April in paper pots, as described and illustrated on page 23. These plants, set out, pots and all (with the bottoms removed, of course), will start bearing toward middle of June and continue until the first outdoor planting yields fruits. A third sowing may be made late in June or early in July, for a full crop.

After the young plants start to spread over the ground they should not be moved because it is apt to bruise them. They should be trained early to spread in the direction of the row. Keep the soil loose and free of weeds. When weeding the hills, which should be done by hand, be sure to press soil over any rootlets that are apt to become exposed. By pinching out the centre of vines they may be confined to limited space.

Several applications of liquid manure in the course of the bearing period will prove highly beneficial.



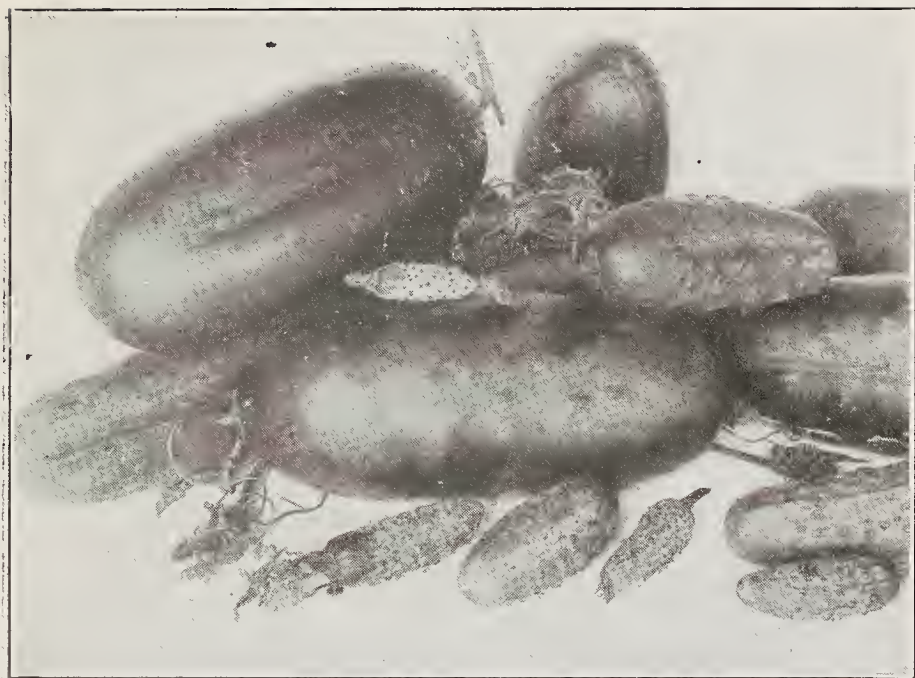
CUCUMBERS—BEST KINDS FOR THE HOME GARDEN

THREE distinct types deserve consideration, namely, the *Long Green*, the *White Spine*, and the *Extra Early Pickling* varieties. Which to grow depends entirely on the purpose for which they are intended. For slicing, the *White Spine* varieties are the most popular.

Extra Early White Spine (see above) bears short but symmetrical fruits within fifty days from sowing seeds. They are good while small, but quickly lose shape and become three-lobed, with large seed cells. A much better sort is *Davis Perfect*, which reaches good size about a week later, but must be considered the best type to date for the home garden. (See illustration on preceding page.)

Extra Long or *Evergreen White Spine* is a still later sort. *Cool and Crisp* and *Klondike* are two other good strains.

Improved Long Green or *London Long Green* is a medium early, spineless sort, valued particularly in the West.



CUCUMBERS—SORTS FOR PICKLING PURPOSES

TO BE a good sort for growing pickles, a variety must be both early and prolific. While in the cool northern sections cucumbers thrive during a long season, in most parts they are planted as a second crop to follow early potatoes, or any early garden crop.

But earliness and prolific character seldom go together with size of individual fruit. Fruits of sorts mentioned below are generally of short, blocky shape, with seed cells way out of proportion to size of fruit. Their flavor does not differ materially from other cucumbers.

The earliest of all is *Early Russian*, which develops very small pickles only, but is particularly adapted to sections having cool, short seasons. *Boston Pickling* or *Early Green Prolific* as shown above, is a great favorite throughout New England. *Westerfield* or *Chicago Pickling* bears larger pickles and is very popular in the West. *Fordhook Pickling* is recommended as both a pickling and slicing variety.



CUCUMBERS FOR UNDER GLASS AND ON THE PACIFIC COAST

FORCING cucumbers in greenhouses or hotbeds is a delightful and interesting hobby which, with a little study, may be practised by any one having the facilities. Seeds are generally sown in the fall for an early winter crop and up to January for extra early spring use. Plants are started in individual paper pots and only two should be allowed to develop, to be set two feet apart each way. Vines are trained to trellises or permitted to spread in frames.

Davis Perfect, as mentioned on page 232, is one of the best American sorts for under-glass culture. The English sorts, of which Rollison's Strain of *Improved Telegraph* is the best known, grow to be as long as eighteen inches to two feet and have a distinctly mild flavor of their own.

On the Pacific Coast cucumbers do well anywhere where the moisture supply is adequate. For this reason they are frequently planted alongside of irrigation ditches.



MUSKMELONS

IN THEIR essential requirements as to soil, season of planting, method of planting, and cultivation, these differ very little from cucumbers and the general directions given on pages 230-231 should be followed with muskmelons as well. However, bear in mind that all melons require a longer season to grow to full size and ripen. They also need more warmth to be of good quality.

Fortunately a wide choice of varieties is ready to accommodate planters in all sections. In cool parts of the country and on heavy soils the small-fruited, extra early sorts give general satisfaction. It is advisable, however, to start the seeds early in individual paper pots in the house.

Any number of classifications as to types in melons may be attempted, but for all practical purposes they may be divided into green-fleshed, the yellow or salmon-fleshed, and the large smooth or Cassaba type. The last named is of rather limited usefulness in most sections.



MUSKMELONS—HOW TO FIGHT INSECTS AND DISEASES

THE little striped yellow beetle, referred to under cucumbers, is also most destructive in a melon patch and should be combated promptly. In addition, during dry, hot weather, a little black flea is apt to bother the seedlings. Fight it by sprinkling the plants with Slug-Shot or tobacco dust. Aphis or Green Plant Lice likewise display a preference for melon vines which, when badly infected, should be destroyed to prevent spreading of the pest. Attempts to control it by spraying have, so far, proven only partially successful.

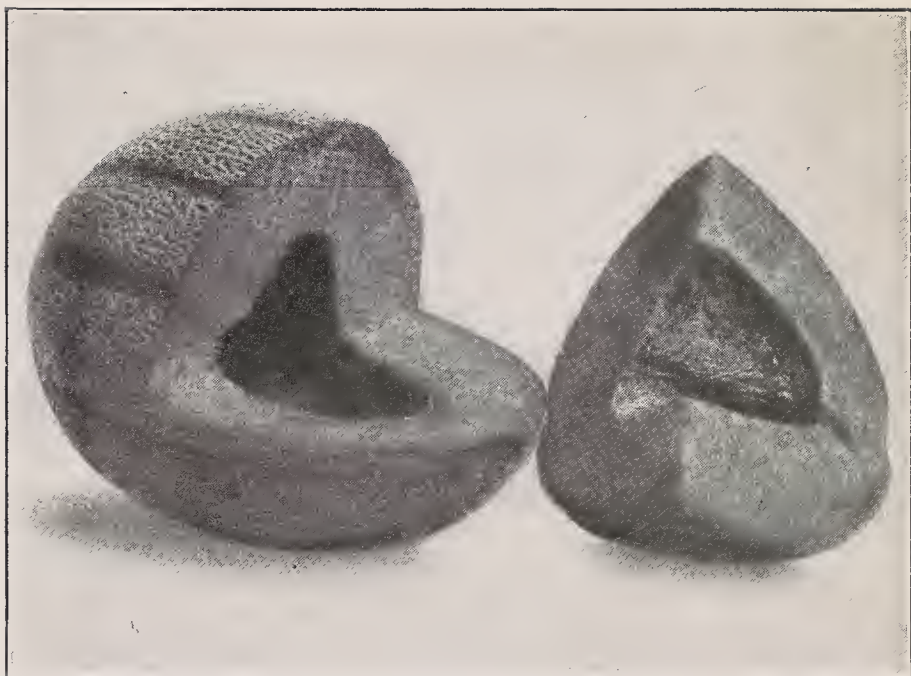
The bacterial wilt is the most dreaded of the fungous diseases attacking melon vines, because science so far has failed to discover a remedy. Spreading of rust may be prevented by spraying with Bordeaux Mixture. But the safest plan, in the home garden, is to promptly pull up any diseased vines. Carry them away from the patch and destroy by burning, after saturating with coal oil.



MUSKMELONS—SPECIAL SOIL REQUIREMENTS AND HOW TO GATHER

THERE is no question but that quality in the melons differs on soils of a different character. Some claim that a warm, sandy loam grows the best product, but excellent quality crops have been raised on heavy clay soil. A great deal depends on the variety that is being grown as well as on the season.

When is a melon ripe? As a rule, with the smooth-skinned sorts, a change in color will announce the start of the ripening process. When the stem that joins the fruit to the vine begins to crack around the edges next to the melon and a slight twist will separate the two, the fruit may be considered ripe. With the netted varieties, the gradual change in color is not so easily detected and a closer watching for the cracks around the stem end is advisable. The melons are generally of top-notch quality when a few drops of a reddish juice begin to show at the cracking stem end.



MUSKMELONS—BEST ORANGE OR SALMON FLESHED SORTS

THESE are suggestively the most desirable for the home garden, have thicker flesh and are of superior flavor and aroma when compared with the green-fleshed kinds. They are particularly well adapted to cool sections. In warm localities they must be picked promptly, when ripe, or the hot sun will quickly turn the flesh soft.

Emerald Gem is the best known and most widely grown of this class. The melons are small, heavily ribbed, sometimes slightly netted. Skin is green and turns to a yellowish brown as the fruits ripen. It matures in about ninety-five days, being one of the earliest.

Burrell's Gem shown above has often been termed the golden-fleshed *Rockyford*. It is of typical *Rockyford* shape, well netted, with thick flesh of highest quality.

For light, warm, sandy soils where other salmon-fleshed sorts disappoint, the new *Fordhook* will be found of great value. *Tip Top* is one of the largest in this class.



MUSKMELONS—THE BEST GREEN-FLESHED KINDS

THE earliest of all is unquestionably *Extra Early Jenny Lind* which, while quite small, is of superb quality. The choicest strains of it often produce fruits that develop a peculiar knob or "button," at the blossom end.

Rockyford or *Netted Gem* shown above is the most famous and best known of the whole family. Due to the efforts of Colorado truckers, special rust-resistant strains of this variety have been developed, making the growing of melons possible where other kinds fail.

Extra Early Hackensack and *Hackensack* or *Turks Cap* are two larger sorts, almost round, slightly flattened, heavily ribbed, and of particular value for light, warm, sandy soils. *Long Island Beauty* is a larger form.

Ohio Sugar as shown on page 236 is the green-fleshed brother to *Tip Top* among the yellow-fleshed sorts. It combines thick flesh, superb flavor, and remarkable adaptability to many soils, with splendid size.



MUSKMELONS—SPECIAL SORTS FOR UNDER GLASS AND PACIFIC COAST CONDITIONS

EXPERT care and considerable experience are required to grow melons successfully indoors out of season. For this reason and because melons are more exacting in their requirements than most other greenhouse crops, their growing under glass is practised largely under the supervision of competent gardeners. They are generally grown as a companion crop with beans.

Blenheim Orange and *Sutton's Emerald Gem* (shown above) are both English varieties of unquestioned merit. They bear fruits from 100 to 115 days after sowing.

On the Pacific Coast melons or cantaloupes thrive to perfection. They grow to great size.

The smaller sorts of the *Jenny Lind* type are preferred for the home garden. The *Cassaba* or *Yellow Pineapple Melon* is esteemed as a winter keeper. *California Large Nutmeg* and *Montreal Nutmeg* are two large, green-fleshed sorts in popular favor in the large cities.



WATERMELONS

THEIR soil requirements and general methods of cultivation differ very little from those given for muskmelons. However, watermelon hills should be placed at least nine feet apart each way, since the vines grow as rampantly as those of pumpkins or squashes. From six to ten seeds are generally placed in a hill and only one or two plants should be allowed to develop. Where melons of good size are wanted, the number of fruits per vine should be limited to two or three.

Watermelon vines are exceedingly tender and resent being moved about, tramped upon, or bruised or injured in any way. They require a long season during which to develop and grow. For this reason, repeated plantings for a succession of crops are not practical excepting on the Pacific Coast. Rather select sorts maturing in succession.

The best way to tell whether a melon is ripe or not is to knock against it with the knuckles of your fingers, as you would against a door. If the sound is solid, the melon is green. If it sounds hollow, it is apt to be all right. Another test is to turn the melon over and scratch the lower side, which generally is yellow. If it is hard and cannot be scratched easily it is safe to judge it as ripe.



WATERMELONS—THE EXTRA EARLY KINDS

AMONG watermelons more than any other vegetable fruits you cannot find earliness, size, and quality in one and the same kind. Thus *Cole's Early* and *Kolb's Gem* are quite early, bearing ripe fruits in seventy-five to eighty days. But their size is comparatively small and their quality is very indifferent. Their usefulness is limited, therefore, to sections with short seasons.

Fordhook Early, while just a few days later than above sorts, bears fruits as large as the top of a barrel, even larger, under favorable conditions, and is of truly elegant quality. It is a round, dark-skinned sort (see illustration), an ideal home garden sort, and a good one for market. It is the earliest ripening sort, combining good quality with fair size. *Phinney's Early* is a handsomely green-and white-striped sort of about the same season as *Fordhook Early* but does not grow quite so large.



WATERMELONS—THE LATE KINDS

TWO different types are found in this class, though often it is difficult to draw a sharp line of distinction in the variation of shapes. There is the short, round type, generally preferred for marketing and shipping because of the superior carrying qualities of the fruits. The long type generally has thinner skin.

Hungarian Honey, *Iceberg*, and *Sweetheart* are, perhaps, the most popular sorts of the short, thick type, the last named being often nearly round. All are of fair quality.

Mammoth Iron Clad and *Georgia Rattlesnake* or *Striped Gypsy* (as illustrated) are the two best-known representatives of that class bearing elongated fruits with light and dark green stripes. *Sugar Stick* is a pale green skinned sort, slightly netted with darker green stripes with flesh of truly delicious quality. But the acme of quality is found in the very large, long, dark green skinned sorts of which *Kleckley's Sweets*, *Halbert Honey*, and *Tom Watson* are the greatest favorites throughout the country.



WATERMELONS ON THE PACIFIC COAST

IN THE warm, alluvial soils of the interior regions, watermelons thrive like weeds. They do better in the warmer sections than muskmelons, and are more easily suited in their soil requirements. Best results are obtained in the light, sandy soils underlaid by a heavier subsoil that retains the moisture well. But good melons can be grown all along the coast, on most any soil.

For an earliest crop home gardeners sometimes take a chance of losing the first planting by sowing seeds in March. April is a perfectly safe month to sow seeds in the interior valleys, while May is the earliest month to make sowings in frosty localities. For a succession, sowings may be made up to July and, in frostless regions, melons may be enjoyed until Christmas.

Lodi is a light green sort which, for many years, ruled supreme on the Pacific Coast and still controls some of the California markets.



PUMPKINS—SOWING SEEDS AND CULTIVATION

BECAUSE the vines grow so strongly, pumpkins cannot be considered a practical crop for the home gardens of moderate dimensions.

As a rule, pumpkins are grown as a by-product of the cornfield (see illustration) or in some isolated fence corner where the vines can spread without restraint. In the cornfield a few seeds are placed in every third or fourth hill of every third or fourth row, covering them about half an inch deep. When grown separately, hills are prepared the same as for watermelons, about nine feet apart.

As the plants are very susceptible to cold, seeds should not be sown until sometime during June, generally when corn is thinned out. Seedlings appear within a week. Only two should be allowed to grow in each hill. Given rich soil, they develop very rapidly. They have no insect enemies of any consequence and require but one thing to do well, namely, *ample moisture*.

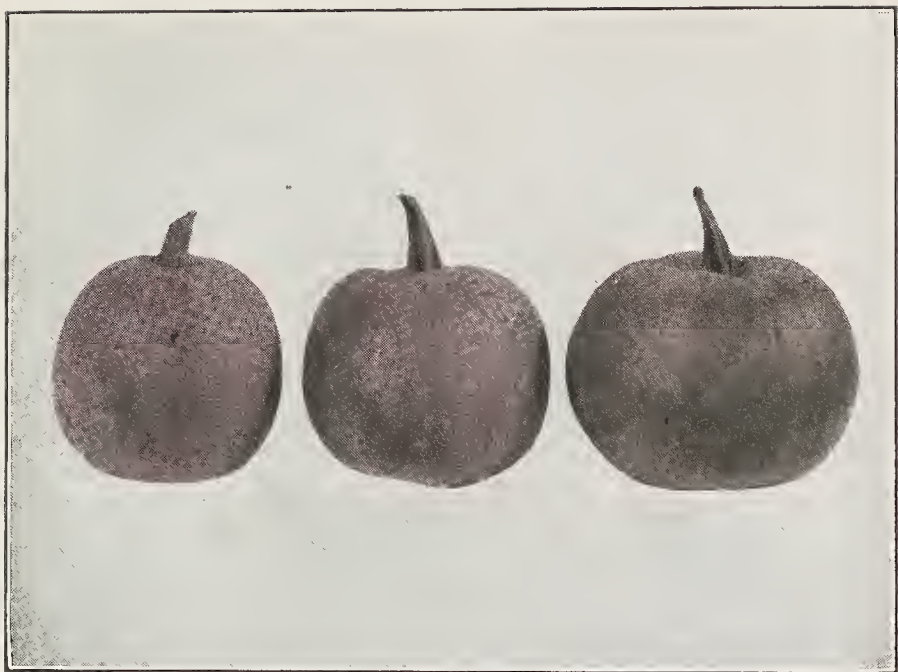


PUMPKINS—HOW TO GROW LARGE SPECIMENS AND STORING

WHERE extra large pumpkins are desired for fair or exhibition, it pays to prepare a special hill, as follows: In good garden soil, dig a hole, about two feet deep and three feet across. In this put well-rotted manure or compost to a depth of eighteen to twenty inches. Place a four-inch draitile in upright position in centre of this and build the hill of soil on top of the manure, around the tile, which will appear like a chimney.

Sow a dozen seeds around this tile and, in due time, reduce the seedlings to the six strongest. Once a week pour several buckets of water in this hill through the tile. When fruits set, reduce them to two, or even one, per vine.

All pumpkins are gathered when the frost has killed the vines and before hard frosts threaten to injure the fruits. Cut them off, with four or five inches of stem attached, for easy handling. Store in barrels with straw.



PUMPKINS—BEST SORTS FOR HOME USE

DON'T look for flesh of good quality in pumpkins of large size. None of the mammoth sorts, generally admired at fairs, are fit for making pies. Even old *Connecticut Field* or *Large Cheese* is really good only for feeding stock. *Sweet Sugar* is one of the earliest and best for home use though the fruits seldom grow larger than ten to twelve inches in diameter. This is the brilliant orange yellow skinned sort so often found on city markets and illustrated on page 246. In *Winter Luxury* pumpkin (illustrated above), also called *Livingston's Pie Squash*, we have, perhaps, the highest quality sort for home use. In size the fruits average like those of *Sweet Sugar*, but they have a light yellow skin sometimes slightly ribbed.

Cushaw or *Crookneck* is a larger, later sort with yellowish green skin, netted with dark green stripes. Shaped like the *Crookneck* squashes. *Japanese Pie* is a very good sort that keeps splendidly, although it is one of the first to ripen.



PUMPKINS ON THE PACIFIC COAST

PUMPKINS, such as grow on the Pacific Coast, are the wonder of the horticultural world. In California particularly, truly phenomenal records have been made in growing them. In size of individual fruit, number of fruits per vine, and yield in tons per acre, California leads the world in pumpkin production.

Special soil preparations hardly ever prove necessary. On the rich, rather heavy loams of either interior lowland or along the coast, the crop reaches perfection. But any soil will yield a good crop if moderately fertilized and plowed deeply. The distance at which to place the hills depends entirely on the richness of the soil, vines having been known to spread fifty feet or more.

Seeds are sown when the season has become thoroughly warm, in the same manner as described on preceding page.

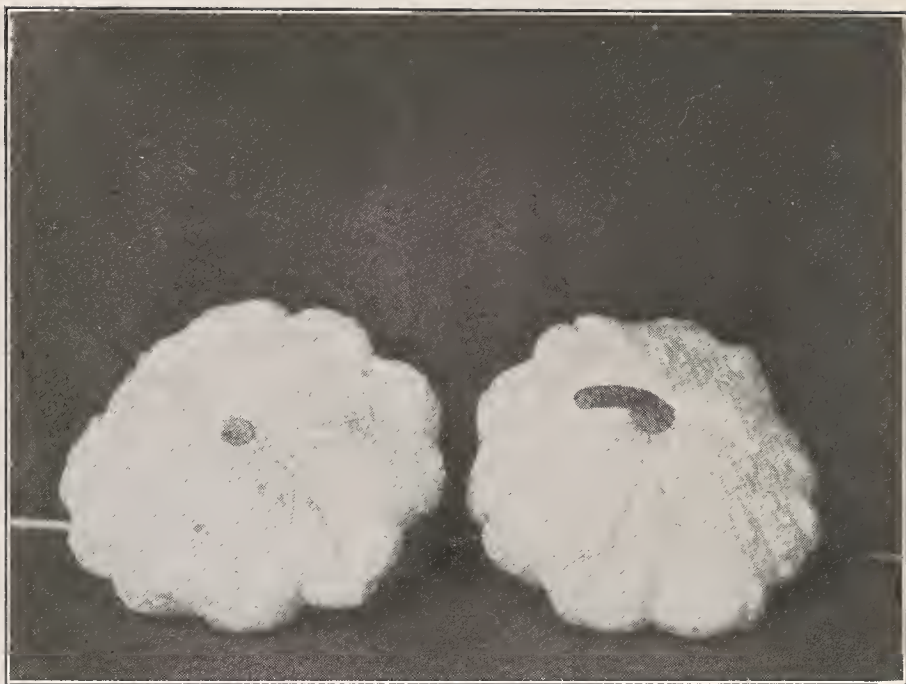
All the sorts mentioned on page 247 are grown on the Pacific Coast together with many new hybrids of largely local fame and popularity.



SQUASHES

IN ALL essential details of sowing seeds and cultivating, squashes may be treated just like pumpkins. As a matter of fact, the two are seldom ever considered as two distinct forms of plant life, excepting in the care of the bush forms of early summer squashes. The average packet of the small-seeded summer sorts contains sufficient seeds for a dozen hills. One ounce of the larger-seeded winter varieties will sow twenty-five hills.

The summer squashes grow on upright, compact plants for which reason the hills are generally put four to five apart. The late, strongly vining winter sorts are grown like watermelons or pumpkins. If the squash bugs (flat-backed beetles) attack the young plants, sprinkle them with Slug Shot or other finely powdered insecticides. When the squash bugs attack the vines, they should be pulled up and destroyed. Early in the season they can often be cut out with a knife without injury to the plants.

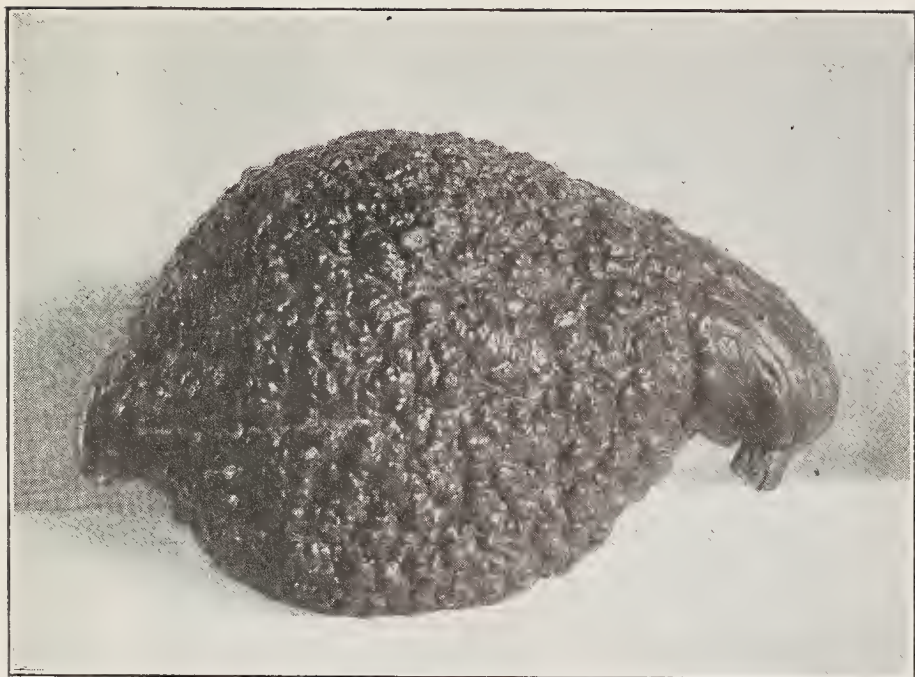


SQUASHES—FOR EARLY SUMMER USE

TO SECURE an extra-early crop, seeds may be sown in individual little paper pots, in the house, about May 1st. Place four seeds in each pot, cover about half inch deep with light soil, less with heavy soil. After two weeks reduce plants to the two strongest per pot and, when soil and season have become thoroughly warm in early June, set the plants into well-prepared hills.

From two to four feet of space should be allowed between the hills, depending entirely on richness of soil and variety. The small white or yellow *Scalloped* or *Patty Pan Squashes* will yield handsome crops in limited space. *Early White Bush* (shown above), *Yellow Bush*, or *Golden Custard* are the most popular kinds.

The *Crookneck* type makes a ranker growth. *Golden Summer Crookneck* and *Mammoth Yellow Crookneck* differ in size only. *Bush Fordhook* matures a week later than these extra early sorts, but is of superior quality and keeps better.

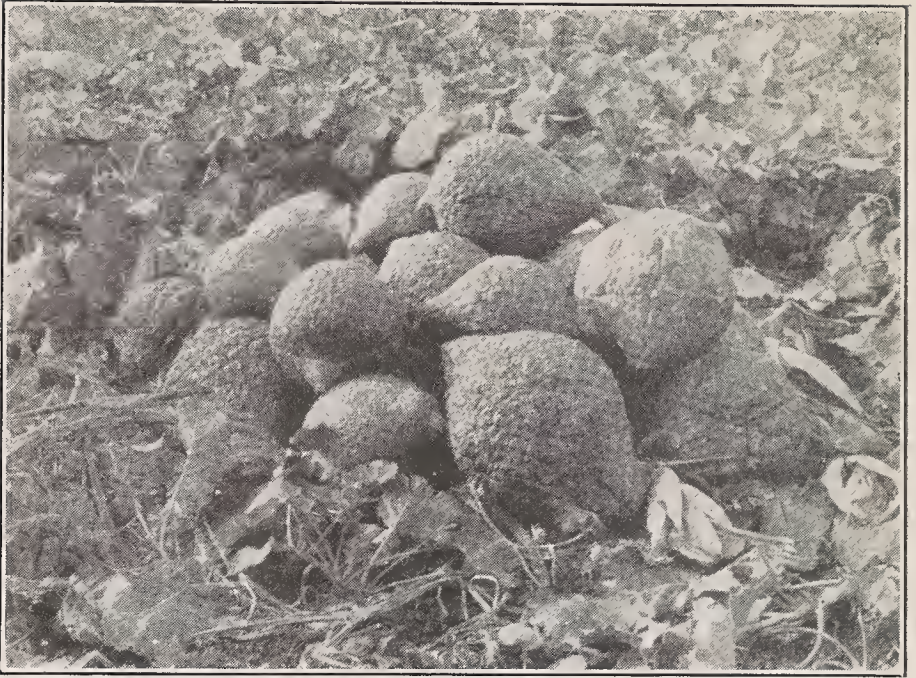


SQUASHES—LEADING KINDS FOR WINTER STORAGE

SEEDS are sown like those of pumpkins, in the corn-field or in hills, ten to fifteen feet apart. They are generally planted late in June or early in July.

The leading winter squash in all sections is *Hubbard*, a curiously shaped sort with dark green skin and rich orange-yellow flesh. The type called *Warted Hubbard* is perhaps the most popular. As illustrated above, its skin is covered uniformly with small irregular lumps—hence the name. The third sort of the remarkable *Hubbard* type is *Red* or *Golden Hubbard*, with sometimes smooth sometimes warted skin of a deep orange color.

Different sections have special favorites in winter squashes. *Boston Marrow* is particularly popular throughout New England. *Gregory's Delicious* is said to be the finest flavored squash in cultivation to-day. *Essex Hybrid*, *Turk's Cap*, and *The Warren* are all highly ornamental, beautifully colored quality squashes.



SQUASHES—WHEN TO GATHER AND HOW TO STORE FRUITS

PROPERLY harvested and stored squashes will keep until May or June of the following year if attention is paid to careful handling. Fruits should be gathered soon after the first light frosts kill the foliage and before hard frosts threaten to injure the squashes.

Handle them carefully! Cut them from the vines, leaving a good piece of stem end on each fruit. When loading wagon or wheelbarrow, *place* them carefully on top of each other—don't *throw* them. The best place to keep them is a light, airy room with an average temperature of about fifty degrees. Frequently the attic of the home makes an admirable storage place if frost can be kept out by keeping the attic door open.

On the farm squashes may be stored in barns or airy cellars, on straw, on the floor, in bins or in barrels, the same as pumpkins.



VEGETABLES OF UNUSUAL CHARACTER

THE vegetables discussed in the following pages might well be considered the “delicacies” of the vegetable kingdom. The majority of them require a great deal of care or patience or both to grow them from seeds to maturity. For this reason the home gardener of limited experience will find it more advantageous to start with plants easily secured from seedsmen, nurseries, or florists.

With one exception (Leeks) the vegetables in this class require a long season to yield the desired crop. In some cases several years will elapse before the planter, who starts with seeds, may gather the product of his labors.

On the Pacific Coast all of them thrive to perfection. In the warmer sections the hardy kinds are year-around vegetables, while those of a more delicate nature attain a size and quality such as no other part of the world can put into vegetables. This applies particularly to artichokes and eggplants, the popularity and usefulness of which is rather limited in other sections of the country.



ARTICHOKES

THERE are two distinct types. One, the *Globe Artichoke*, a member of the thistle family (see illustration) is grown for its large, edible flowerheads which, while young and tender, are good to eat raw or as a salad. The other is the *Jerusalem Artichoke*, a member of the sunflower family, grown for its fleshy roots.

Globe Artichokes, as a vegetable, are not frequently met with in American gardens. Plants are started by sowing seeds or by setting out root-divisions or plants. Grown from seeds sown outdoors, the plants will not bear globes until the following year. Seeds are sown in April, in rows two feet apart, covered one-quarter inch deep. Seedlings are thinned out to stand six to eight inches apart in the row and cultivated like any other vegetable.

The following spring plants should be set in well-manured beds two feet apart each way. They will bear globes from June until fall.



ASPARAGUS

THE two distinct ways of starting an asparagus bed are to either sow seeds or set out roots. Sowing seeds is easier and less expensive than setting out roots. But beds made from roots will yield the product several years sooner.

Well-rotted manure in large quantities should be dug into the soil. Heavy clay soils should be made more friable by adding sand or sifted ashes. *Seeds are sown* as early in the spring as garden can be made, in rows two and a half to three feet apart, dropping one seed to every half inch and covering them about one-half inch.

Seedlings generally appear within three weeks. They should be encouraged to grow rapidly by frequent hoeing and weeding. When six inches tall, they should be thinned out to stand six inches apart in the row. Four rows, each fifty feet long, will provide a fair supply of stalks for the average family. It takes about three ounces of seeds or 200 plants to secure a bed of that kind.



ASPARAGUS—SETTING OUT ROOTS AND CULTIVATING BEDS

ROOTs are generally planted in the spring as soon as the soil can be put in good condition. There is also a short period in the fall, just after frost stops growth of the tops and before the ground freezes hard, when roots can be transplanted successfully.

The ground for the bed should be laid out in broad furrows, a foot wide, four to six inches deep, with two to three feet of space between the rows. In the centre of these furrows make a slight ridge, about two inches high, with fire fly plow or hoe. Place roots across this ridge, so that the crowns are several inches above the surrounding roots, putting the roots from twelve to eighteen inches apart in the row.

Cover them but slightly at first, say about two inches deep. As the young shoots appear, pull more soil over them, until the trenches are again level with the ground. Cultivate until the plants have attained full growth.



ASPARAGUS—THE CARE OF THE BED AND BEST VARIETIES

TO KEEP an asparagus bed in good bearing condition it should have thorough cultivation between seasons and a liberal fertilization each fall. After the stalks turn yellow in the fall they should be cut off, burned, and the whole bed given a coat of four inches of manure. By spring most of this will be rotted so it can be dug into the surface without disturbing the crowns of the plants.

Should the asparagus rust attack the plants, spray them with Bordeaux Mixture. If only a few stalks seem affected, cut them off and burn them. Where the whole bed seems attacked, fight the rust and prepare to start a new bed in another part of the garden. Air-slaked lime, dusted on the new shoots, will combat the asparagus beetle.

Early Argenteuil is a splendid early French sort. *Palmetto* is a large, vigorously growing dark green sort, while *Columbian Mammoth White* is the best known of the easily blanched sorts with naturally white shoots.

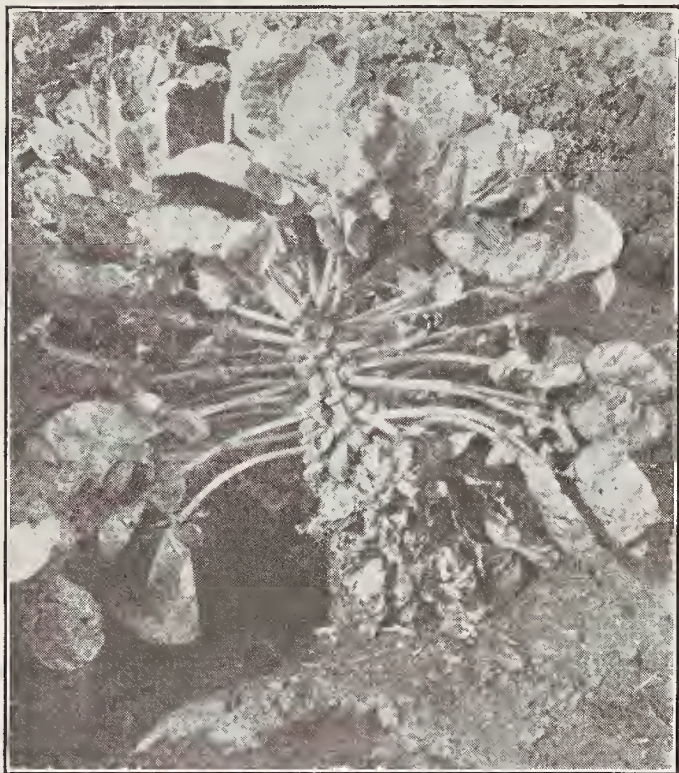


BRUSSELS SPROUTS

GROWN as both an early fall and winter vegetable, this unusual variety of the cabbage family is sown and cultivated very much like common cabbage. Seeds may be sown in a hotbed or cold frame for an early crop or outdoors, early in May, in rows eighteen inches apart, covering seeds about one-quarter inch deep. As soon as the seedlings make the third pair of leaves, they should be thinned out to stand four inches apart in the row.

Early in June, when they have developed into sturdy plants, as shown above, transplant them into their permanent rows, in rich soil, allowing eighteen inches to two feet between the plants and two to two and a half feet between the rows.

Brussels Sprouts are not as hardy as ordinary cabbage. The stalks should be pulled before severe cold weather sets in and stored in a frost-proof cellar. The sprouts may either be left to remain on the stalks until wanted or they may be cut off and packed in shallow berry baskets.



BRUSSELS SPROUTS—BEST KINDS TO GROW

THREE distinct types of Brussels Sprouts claim the home gardener's attention, namely, the *French*, the *Danish*, and the *Long Island American-grown*. The difference is found largely in the habit of growth of the plant and in the degree of adaptability to certain sections.

Half Dwarf Paris, as imported from France, is of special value for warm sections. It will form tightly folded sprouts where other strains fail. (See illustration.)

Danish Prize is a tall-growing sort of special value for heavy soils and cool, moist regions. It is very much larger in circumference at base of plant than on the top.

Long Island Improved is an acclimated strain of American growing, surpassing, in general usefulness, most others.

One packet of seeds provides between 300 and 400 plants. The average plant yields two quarts of sprouts.



CAULIFLOWER

AS ONE of the numerous members of the cabbage family, cauliflower, to do well, requires very rich soil, cool seasons, and an abundance of moisture. It is generally grown either as a spring crop or for late fall. Seeds resemble those of cabbage, are sown like them, and plants are transplanted in a similar manner.

For an early spring crop, sow seeds in the fall, either outdoors or in a cold frame. If sown outdoors, the seedlings must be moved into a cold frame before severe cold weather sets in. Neglect to prepare for this crop in the fall can be remedied by spring sowings in a hotbed.

Late in May or during early June preparations are made for the main crop in the fall. Seeds are sown in rows, eighteen inches apart, covered one-quarter inch deep and seedlings are thinned out to stand four inches apart. Late in June plants are set in rows with two or three feet between the rows, eighteen inches to two feet between the plants, to be cultivated like cabbage.



CAULIFLOWER—FEEDING AND WATERING THE CROP

THERE are two prime requisites to growing cauliflower successfully, namely, an abundance of easily available plant food and a constant water supply. Given these, this vegetable may be grown anywhere excepting in those sections that know no cool seasons or where water cannot be supplied.

Besides enriching the soil liberally prior to setting out the plants, repeated watering with liquid manure will greatly benefit the crop. In sections where an abundance of rainfall is apt to cause heavy clay or loaming soils to be sour, the liberal use of lime will greatly benefit soil.

While well-rotted manure, used in liberal quantities, will be found most useful, one hundred pounds of a complete commercial fertilizer to every piece of ground size 30 x 60 feet will prove a wonderful stimulus to the crop. It should be applied in instalments, using one-fourth when preparing the soil and giving three applications of twenty-five pounds each at intervals throughout the season.

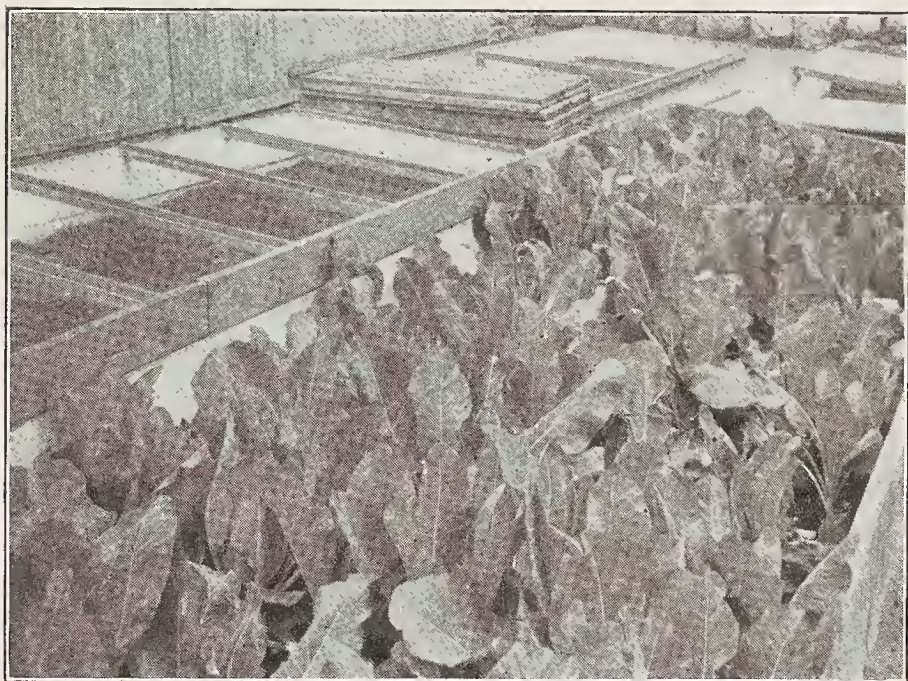


CAULIFLOWER—SPECIAL POINTS TO WATCH AND BEST KINDS

CLEAN and thorough cultivation is absolutely essential to success with this very exacting vegetable. On heavy clay soils frequent cultivation, that creates a dust mulch, will often make up for an insufficient water supply. Hoe right close to the plants, giving shallow cultivation as they expand. If insects trouble them, use the same remedies as suggested for cabbage.

When the young heads begin to form, draw some of the leaves across to prevent the sun from discoloring or scorching them. This may be done by tying the large outside leaves at the tips with raffia or soft twine.

Besides the sorts suggested on next page, *Danish Giant* or *Dry Weather* (see illustration) is easily the most popular sort throughout the country. It endures as much drouth as any strain of this vegetable. It requires a long season to reach full size. *Algiers* and *Autumn Giant* are two large but very late sorts to mature.



CAULIFLOWER—SPECIAL SORTS FOR UNDER GLASS AND PACIFIC COAST

EXTRA rapid development and compact growth make *Extra Early Dwarf Erfurt* cauliflower the ideal sort for growing in hotbeds and on side benches in greenhouses. An abundance of water and well-regulated ventilation are absolutely essential to success with this vegetable under glass. *Early Snowball* is of the *Dwarf Erfurt* type and may be considered the most popular.

Conditions up and down the Pacific Coast favor an ideal development of perfect cauliflower heads providing stock is taken of this crop's peculiar requirements. Failures are largely due to a lack of moisture when the plants need it most and to too late a start in regions with a cool climate. As a general rule, for early crops, seeds are sown during January and February in a hotbed.

Broccoli is a small coarse species of cauliflower forming either white or purplish heads. It is hardier, stands more neglect, but does not measure up to cauliflower in quality.



CELERY

GOOD celery can be grown anywhere by choosing the proper sort and giving plenty of water artificially if the natural supply fails. Two distinct types of celery claim the home gardener's attention, namely, the early or self-blanching sorts and the later, green-stalked kinds. All sorts prefer a rich, deep loam or muck.

For an extra early supply, seeds of sorts as described on page 268 may be sown in a hotbed or seed flat by middle of February. Sow very thinly in furrows, about three inches apart, cover lightly and press soil in firm contact with seeds with the flat side of a board or ruler. Cover surface of bed or flat with muslin or paper and water until the soil has become thoroughly saturated.

Celery seed germinates slowly and, for best results, the bed or flat should remain in a uniform temperature around seventy degrees (like the average living room or kitchen). As soon as the seedlings appear, they should be kept cooler to prevent a spindly growth.



CELERY—ARRANGING FOR A CROP SUCCESSION

WHILE early celery, from seeds sown as described on preceding page, may be had by middle of August, the early crop can never lay claim to the quality found in later sorts requiring a longer season of growth. The main crop of celery is generally harvested during late summer and fall, from seeds sown early in March, in a cold frame or early in April outdoors.

Sow seeds in a cold frame just like in hotbed or seed flat. Outdoors, sow seeds in a carefully prepared bed, with rows a foot apart. Seedlings generally appear in two or three weeks after sowing. If they come up too thickly, thin them out to stand an inch apart in the row. When they form the third or fourth pair of leaves, transplant them into another bed, four inches apart.

Sow seeds, at one and the same time, of one or two good early sorts and a better keeping late variety. A packet generally contains enough seeds to raise 500 plants.



CELERY—TRANSPLANTING AND SETTING OUT

CELERY is *the one* vegetable that may *not* be sown and left to grow in the original row, even if properly thinned out. It *must* be transplanted repeatedly, in order to develop the type of a root system most essential to produce perfect stalks.

About June 1st, when the young plants have reached good size, they should be set in carefully prepared rows where the crop is to mature. Before planting them, cut back the tops to within three inches of base and prune the tap roots, leaving them only two or three inches long. Just what this will do is shown on page 265, showing the original seedling, the pruned plant, and the resulting plant ready for final transplanting.

Plants are set either in single rows six to eight inches apart, allowing two to three feet of space between the rows as shown above. Or on very rich soil they are often planted in double rows, as shown on page 264, allowing ten to twelve inches between the two rows.



CELERY—CULTIVATION, SPRAYING, BLANCHING

WHATEVER phase of cultivating is being done—transplanting, hoeing, hilling—the gardener should be sure that no soil gets in between the stalks or in the heart of the plant. Watch this particularly while setting out the plants and while hilling.

Frequent hoeing and regular watering will keep the crop in thriving condition without much further care. Hot, dry weather will sometimes cause blight, which will destroy the foliage and cause the stalks to rot. Repeated spraying with Bordeaux Mixture will do much to ward off or check the disease and will not injure the product since the stains are easily washed off.

Of the various methods of blanching, the drawing up of loose soil around the carefully gathered stalks is still most popular because the least expensive and most satisfactory in improving quality. However, the use of large drain-tile, as shown on page 266, or blanchers of heavy, prepared paper reduce the work of blanching considerably.



CELERY—THE EARLY SORTS

UNTIL the advent of the early varieties, celery was largely considered a winter vegetable and obtainable only at prices which greatly restricted its use by the broad masses. The introduction of *White Plume* and *Golden Self-Blanching*, some thirty years ago, completely changed this condition. The ease with which these sorts are grown and blanched and their quick development has done much to make celery the popular vegetable which it is to-day.

White Plume is easily the quickest maturing sort in cultivation, becoming ready for use in August from seeds sown in March. Its centre leaves are naturally of white color, as shown in illustration above.

Golden Self-Blanching, while almost as early as *White Plume*, is of far superior quality and keeps well until Christmas. It really does not blanch itself. The name "Self-blanching" rather refers to the ease with which that work is accomplished.



CELERY—SORTS FOR WINTER USE AND STORING

QUITE a number of these are available, and their relative popularity depends entirely on the section of the country in which they are grown. Some sections have developed sorts of their own, as for instance, Kalamazoo, Mich., famous for its celery of that name. Perhaps the most widely grown winter celery is *Giant Pascal*, a large stalked, heavily ribbed, deep green sort of great dependability in all soils and sections.

Winter Queen is a great favorite throughout New England and the East. *Giant White Solid* and *Dwarf Golden Heart* are two other dependable sorts, the pronounced characteristics of which are described in their names.

Celery may be stored where it is grown by putting additional soil over it, after mulching the top with hay or straw and banking up the sides with boards. Or the plants may be lifted and packed in a cool, frost-proof cellar or frame, as shown above. This will blanch them.



CELERY ON THE PACIFIC COAST

IN THE low, moist lands of the river valleys and in such regions as are favored by a low average summer temperature, celery thrives like a weed, and the cultivated product develops magnificently. So congenial are the conditions to the development of this crop that wild chance seedlings of celery are often found.

Any reclaimed swamp, muck soil, or one full of decayed vegetable matter or humus will grow an ideal product where the moisture supply is abundant. Seeds are sown like described on page 264 any time from March to May.

Blanching the stalks may be accomplished by any method that excludes the light and moisture. The individual plants may be wrapped or boards may be leaned against the rows, or soil or straw may be used. But this work should never be attempted while the foliage is wet or moist with dew or rain. *White Plume* and *Golden Self-Blanching* are the two kinds used almost exclusively.



EGGPLANT

SEEDS should be sown in rich soil, about middle of February, in a hotbed, greenhouse, or in a sunny kitchen window in pots or seed flats. Both seeds and seedlings require a uniformly even temperature, averaging sixty-five to seventy degrees, in order to thrive. Unless the gardener is prepared to provide this condition, growing eggplants from seeds is apt to prove a disappointing experiment. Seeds are sown thinly in furrows, four inches apart, covered about one-quarter inch deep with light, sandy loam and the soil should be kept thoroughly moist until seedlings appear. The average packet contains sufficient seeds to raise 100 plants.

When the seedlings form the second pair of leaves, they should be transplanted into another flat, putting them four inches apart each way; or they may be planted singly into individual little paper pots. Repeat the transplanting several times before plants are set into the garden.



EGGPLANTS—PLANTING OUT AND CULTIVATION

DO NOT be in a great hurry to set out whatever plants you have secured. Cool nights do not agree with this child of the tropics. About June 1st, when both soil and season have become thoroughly warm, select the richest spot in the garden. Dig holes, about six inches deep, a foot in diameter, two feet apart each way, and put a large shovelful of manure or humus into them.

Fill balance of hole with soil and set a plant into each spot so prepared. Do not disturb the roots if it can be helped. Press soil firmly around them and keep on the lookout for potato bugs that are apt to attack the young plants. Pick off and destroy them, or dust the plants with Slug Shot. Kept rapidly growing by constant cultivation, eggplants will quickly outgrow insect.

Eggplants will stand a remarkable amount of drouth so long as the soil between them is kept loose by constant hoeing, but large fruits water once a week.

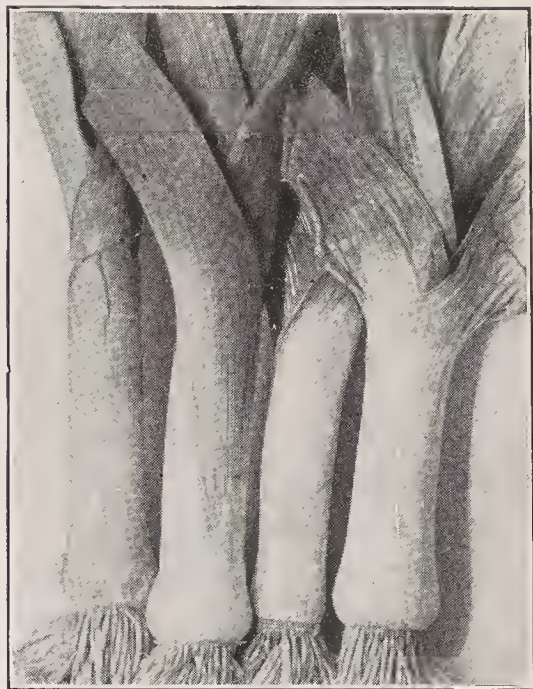


EGGPLANTS—BEST KINDS FOR DIFFERENT SECTIONS

GOOD crops of fruits may be grown even in sections having but 100 frostless days and nights, by selecting either *Early Round Purple* shown above or *Early Long Purple* (below). The former will bear fruits averaging five inches long by three inches in diameter at the thickest part within 120 days after seeds are sown. This sort may therefore be started as late as middle of April and will bear “eggs” ready for use by end of July, providing the plants develop without check.

Early Long Purple shown above perfects fruits six to eight inches long by two and a half inches in diameter at widest part within 135 days after sowing seeds. Bear in mind that all fruits are more palatable before they reach full size and before seeds develop within them.

New York Improved Purple shown above and *Black Beauty* illustrated in colors on page 89 require from 150 to 160 days to reach full size. Both grow to be eight inches long by six inches in diameter, have a beautiful blackish purple skin, and are very prolific. *Black Beauty* is the earlier of the two by ten days and is gradually replacing *New York Improved Purple* because of its uniformly handsome color.



LEEKS

CLOSELY related to onions, from which they differ in being of milder flavor and in not forming bulbs. Instead, the plants have flat leaves which form long, fleshy stalks. Properly blanched by hilling with soil, these fleshy stalks furnish excellent material for soups, stews, or salads. They are not palatable in the raw stage.

Leek seeds look just like onion seeds and are sown just like them, as early in the spring as the weather permits. When the seedlings become three to four inches tall they should be thinned out to stand four inches apart in the row. As they develop, pull soil up to the row to assist in the process of blanching the stalks.

Leeks are very hardy and with slight protection, to prevent their being snowed under, may be left in the ground all winter. Or they may be taken up in the fall, to be placed in a root cellar or cold frame, like cabbage or celery. *American Flag* shown above and *Broad Scotch* or *London Flag* are two sorts of recognized merit.



PEPPERS

MANY of the directions given in connection with egg-plants on pages 271-272 are applicable to peppers as well. These are distinctly warmth-loving plants and every effort should be made to keep them in a constantly growing condition.

Seeds are sown late in February or early in March, in greenhouse, hotbed, or in a flat in a kitchen with even temperature. Pepper seed seldom germinates strongly and evenly excepting under ideal conditions of soil and heat and these are difficult to maintain. For this reason it is wise to sow seeds rather thickly and transplant the seedlings as soon as they are large enough to be handled. The average packet contains about 300 seeds and should provide about 150 plants.

Pepper plants require a long season to develop fruits, for which reason it is not practicable to make successive sowings. Rather depend on sorts maturing in succession to provide a constant supply.

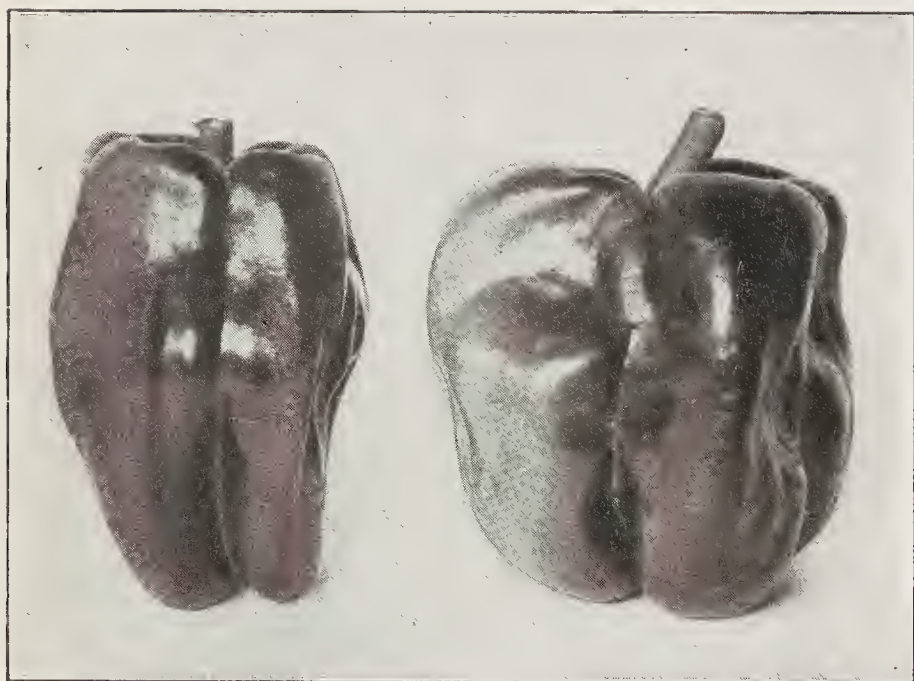


PEPPERS—SETTING OUT PLANTS, THE “HOT” OR PUNGENT SORTS

PEPPER plants will thrive on relatively poor soil, though a moderately rich, sandy loam suits them best and fair crops have been grown on heavy clay. Whatever the nature of the soil, it must have good drainage. Too rich soil will grow large plants to the detriment of the setting of fruit. Excellent crops are grown on newly broken soil supplemented by a fertilizer rich in potash.

The plants are generally set out during early June, in rows, eighteen inches to two feet apart, with two feet of space between the rows. They stand any amount of dry weather so long as they are cultivated thoroughly.

The hottest of the small red peppers for seasoning is *Tabasco*, famous for the sauce made from it. *Bird's Eye* or *Creole* is an even smaller sort but not quite so fiery. *Long Red Cayenne* is the variety generally used in the making of Chili Sauce, as is *Red Chili*, a smaller sort of the same shape as *Cayenne*.



PEPPERS—THE LARGE MILD KINDS OR “MANGOES”

WITHIN 150 days from date seeds are sown *Early Neapolitan* (shown to left) produces handsome crops of large, elongated, four-lobed fruits averaging four inches long by two and a half inches in diameter at the widest part. This is the earliest and sweetest of the large peppers suitable for stuffing. It is so prolific that frequently the branches break under the loads of fruits.

Bell or Bull Nose is a slightly later sort forming more blocky fruits and it is apt to be a little more pungent. However, it is adaptable to the widest range of soils and climates and for this reason is most generally grown.

Chinese Giant (shown to right) is the largest and latest of the mangoes. It does not reach maturity north of Ohio, but will yield fair crops of exceptionally large green fruits where seeds are started before middle of April.

Golden Queen is a large yellow sort, mild, of same season of maturity as *Bell or Bull Nose*, but not as prolific.



RHUBARB, AS GROWN FROM SEEDS

IF THERE is one vegetable that may be considered more indifferent about the soil in which it grows than all the rest, it is rhubarb. It literally grows well in any soil excepting the strong alkali soils of the West. A deep, rich, sandy loam is most ideally adapted to strong development of the plants which do best if heavily mulched with manure in the fall which should be dug into the soil around the plants in the spring.

Seeds may be sown in rows, eighteen inches apart, covered one-quarter to one-half inch deep, as early in the spring as the soil can be put in condition. Seedlings generally appear three weeks after sowing and another four weeks after that they should be thinned out to stand eight or ten inches apart in the row. The average packet of seeds will provide from 25 to 100 plants.

The following fall the roots should be lifted and transplanted into permanent beds, two feet apart in the rows, allowing three feet of space between the rows.



RHUBARB—SETTING OUT ROOTS, CULTIVATION AND SPECIAL KINDS

BY FAR the most popular way to start a rhubarb bed is to set out roots. Two dozen will generally provide enough plants to supply the average family. Since these plants remain in the same spot for years, it pays to liberally enrich the soil at the start.

For each root, dig a hole six to eight inches deep and a foot across. In this place the root in as natural, upright a position as possible. Fill in the soil gradually, press it in firm contact with the roots, covering the crown with three to four inches of fine soil. They should be left to develop at least one year before pulling the stalks. Cultivation consists largely of keeping the soil loose around the plants, pulling out all weeds, and supplying moisture.

Linnælls and *Victoria* are two dependable sorts largely grown throughout the country. *Giant Crimson Winter* is particularly adapted to the Pacific Coast and the West in general.



MANAGING A KITCHEN GARDEN FOR A FAMILY OF FIVE

THE one lamentable fact about the majority of vegetable gardens is that they are sadly unbalanced in so far as the variety of the crops is concerned. Part of the time they will yield a superabundance of vegetables, while at other times there is a positive lack of even seasonable kinds. The fault lies with the planning and I would call the reader's particular attention to that chapter of this book which deals with the making of a plan. Please take it seriously. Soil preparation, digging, raking, sowing seeds, etc., etc., are all essential. But none compare in relative importance with the original plan which should represent the most carefully thought out methods how to secure a constant supply of vegetables throughout the seasons.

Let us assume that you have at your disposal a piece of fairly good ground, size 50 x 100 feet. This would be the equivalent of about one-eighth acre and should, under



careful management, yield all the vegetables desired between June and October, besides providing an abundance of root crops for winter use.

The first thing to do is to draw a plan to a scale, dividing the garden into say, four sections, each equalling twenty-five to fifty feet. In the properly balanced garden one section will, perhaps, be devoted to potatoes. Under favorable circumstances, the ten fifty-foot rows should yield from eight to ten bushels of potatoes. Another section should be devoted to root crops of a long growing season, such as long beets, parsnips, salsify, witloof chicory, etc. The third section should be set aside for quickly maturing extra early spring crops, such as radishes, lettuce, green onions, etc., while section number four would serve for crops requiring more space and a long season, like peas, Swiss chard, etc.

Now, let us take the sections one by one, to work out a practical programme. Section No. 1, planted to potatoes, will be busy all season producing that crop unless a very early maturing sort is chosen. In that case the ground



may become available by middle of August for such crops as spinach, turnips, winter radishes, or even celery. Any of these will yield the crop where frost does not check vegetation before middle of October.

Section No. 2, devoted principally to root crops as shown above, of a long growing season should be planned in rows, two feet apart, so as to permit cultivation with a wheelhoe during the latter part of the season. This distance also makes possible the growing of a crop of extra early vegetables between the long season root crops early in the spring. For illustration, beets, carrots, parsnips, etc., have very small tops while in the seedling stage. Throughout May, June, and early July, such vegetables as radishes, lettuce, green onions, etc., may be grown *between* the rows.

Section No. 3 will be the busiest of them all, perhaps, because starting with early spring crops, the ground will become available again within sixty or ninety days, when other *midseason* crops of short season of bearing, like bush beans, early beets, early carrots, early sweet corn,



etc., should take the place of the extra early spring crops. Keep in mind that, where the ground is cropped intensively and each square foot of ground is expected to yield several crops, it pays to select extra early maturing sorts in the different classes of vegetables. Also remember that one row should never be planted to one and the same vegetable in one season.

Section No. 4 will contain the greatest variety of crops because part of them will occupy the ground all season, like Swiss chard, Brussels sprouts, cabbage, etc.; others will occupy space during early spring and summer, like peas, lettuce, etc., to make room for tomatoes, peppers, etc.; still other crops, like sweet corn, will not be planted until middle of June and then in a selection of varieties maturing in succession. Plan to plant all vegetables in rows of uniform length rather than in hills. It facilitates planning, planting, and cultivation.

When the time arrives for active work outdoors (generally middle of April) dig only as much ground each day as can be planted that day. Where the whole garden is



plowed at once and its planting in one day proves both impracticable and impossible, as much ground should be worked over lightly each day with forks and spade as will be planted that day.

The hardiest vegetables, which may be sown as soon as frost is out of the ground, are radish, lettuce, spinach, onions from seeds or sets, carrots, beets, and smooth-seeded peas. Explicit directions as to how to sow and cover them will be found under the respective chapters. It pays best, in connection with most of them, to sow short rows often, say a week apart, rather than to sow large space all at once. The exception to this are peas and spinach of which several rows should be planted at a time, because their yield per row of short length is hardly sufficient for a meal. Experience in this matter will prove the most dependable teacher.

About a week before the last frost is scheduled for your section, it is safe to sow a few rows each of bush beans and sweet corn. Two rows each fifteen feet long, planted a week apart from May 20th until middle of July, will



provide all the stringless beans a family of five can consume between end of July and frost. Corn should be managed slightly different. Plant it in little "blocks" or squares of four fourteen-foot rows every ten days or two weeks up to July 4th.

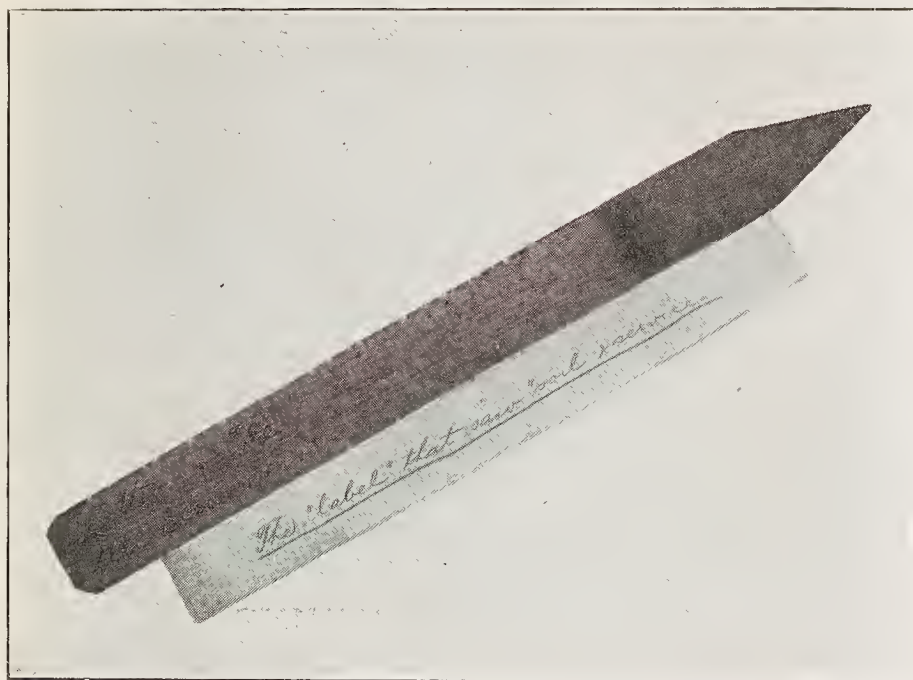
Finally, after Decoration Day or when the maple trees are out in full leaf, it is safe to set out such tender plants as tomato, pepper, and eggplants, also sow seeds of such delicate vegetables as cucumbers, melons, etc. Throughout this book will be found frank statements as to what is considered a practicable or impracticable vegetable from the standpoint of the home gardener. If you would want *your* garden to be above the average, be particular in your choice of classes and varieties and be sure to keep each row busy by repeated sowings throughout the summer, because it is better to cultivate worth-while crops than to let a crop of weeds reduce the fertility of your soil.



MAKING OUT A SEED ORDER

THE average seedsman's "packet," of common varieties of vegetables, contains sufficient seeds to sow thirty feet of row. Packets of novelties and vegetables of unusual character generally contain less than half the quantity of standard packets. One ounce of most staples among small-grained vegetable seeds contains about five times as many seeds as the average packet. Most vegetable seeds, with the exception of onion and parsnip, are of strong vitality for a number of years. It is more economical, therefore, to buy seeds by the ounce, in the case of small seeds, and by the pint or quart, in beans, corn, and peas.

Under the various chapters throughout this book will be found notes how many feet of row to sow for a desired quantity of vegetables. This, in connection with above estimates of relative contents of packets and ounces, will make it easy to gauge one's wants in seeds. Always remember that in seeds, as in everything else, the best is the cheapest.



KEEPING RECORDS

ALL substantial progress is based upon properly kept records. Memory is a poor friend. In gardening matters it forsakes you when you most need it, and to lose the records of one year often obliges the gardener to do that year's work over again, to make the same mistakes and get the same experience.

Keeping records starts with the plan suggested on page 7. It continues with providing a marker or wooden label (as here shown) for every separate row and variety you plant in the garden. On this label put the variety name, the name of the seedsman from whom came the seeds, and the date seeds were sown.

Keep a notebook to record every notable event in connection with each row of vegetables. Put down when the first crop was gathered, how much each row yielded, when the row became exhausted, what you planted as a second crop, etc., etc. *Know* what you are doing by putting it on record.



ABOUT HOME CANNING

In connection with canning, make it a point never to take your neighbor's word as to how to do it. More failures are directly traceable to recipes handed about from house to house than are due to any other cause. Why not call to your aid the United States Government which has expended millions of dollars in accumulating the kind of information that will help home gardeners most. Write to the National Emergency Food Garden Commission, 210 Maryland Building, Washington, D. C., for their Home Canning Manual which gives detailed instructions for canning and drying vegetables and fruits. It may be had for a three-cent postage stamp. In addition, the United States Government is doing its best to help the thrifty housewife by the publication of a series of useful bulletins, all of which are at your disposal, free of charge, by writing to the Division of Publication, U. S. Dept. of Agriculture, Washington, D. C.; Farmers' Bulletin 839, Home Canning by the Cold Pack Method. Farmers' Bulletin 521, Canning Tomatoes at Home and in Club Work; Farmers' Bulletin 841, Drying Fruits and Vegetables in the Home.



SMALL FRUITS IN THE HOME GARDEN

BECAUSE of the prevailing high prices for fruits of all kinds, a berry patch generally proves a most profitable adjunct to the home garden of a permanent nature. A strawberry bed of even small size pays handsomely, in spite of the fact that it occupies the ground the year around. Grape vines may be trained to fences. Gooseberry and currant bushes may be utilized as boundary or division lines or to border the paths. Tree-shaped specimens of both lend themselves particularly well for this purpose.

Here are the names of some of the best known kinds:

1. **CURRANTS:** Black Victoria, Red Cherry, Perfection, Wilder, White Grape.

2. **GOOSEBERRIES:** Downing, Houghton, Industry, Carman, and Portage.

3. **GRAPE VINES:** Black Concord, Moore's Early, Red Brighton, Catawba, White Diamond, Niagara.

4. **STRAWBERRIES:** New Everbearing Superb and Progressive. Of the common kinds, Dunlap, Gandy, Haverland, Parsons, Sample, Warfield, Wm. Belt.

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